AUGUST 2023

DISCUSSION PAPER SERIES NO. 2023-12

Government Interventions in the Domestic Shipping Industry: A Discussion on Market Competition and Maritime Safety

Kris A. Francisco

The PIDS Discussion Paper Series constitutes studies that are preliminary and subject to further revisions. They are being circulated in a limited number of copies only for purposes of soliciting comments and suggestions for further refinements. The studies under the Series are unedited and unreviewed. The views and opinions expressed are those of the author(s) and do not necessarily reflect those of the Institute. Not for quotation without permission from the author(s) and the Institute.

CONTACT US:

RESEARCH INFORMATION DEPARTMENT
Philippine Institute for Development Studies

18th Floor, Three Cyberpod Centris - North Tower
EDSA corner Quezon Avenue, Quezon City, Philippines

publications@pids.gov.ph
(+632) 8877-4000

https://www.pids.gov.ph

Government Interventions in the Domestic Shipping Industry: A Discussion on Market Competition and Maritime Safety

Kris A. Francisco

PHILIPPINE INSTITUTE FOR DEVELOPMENT STUDIES

August 2023

Abstract

The domestic shipping industry has a crucial role in the Philippine economy as it serves as the backbone supporting domestic trade and provides an affordable means of interisland transfer. However, the industry is riddled with inefficiencies with interrelated consequences such as high cost of shipping, low quality of services and high frequency of maritime accidents. Throughout the years, the government implemented policy reforms to improve the performance of the industry, by issuing guidelines and regulations targeted to induce market competition, encourage investments and enhance maritime safety. In this study, we discussed the evolution of policies and examined some market indications of progress vis-à-vis the areas of reform. Overall, we found some positive developments with regard to market competition, lauding the government's efforts to deregulate the industry. We also observed some indications of increased investments in domestic vessels; although comparative data reveals that the country's shipping vessels remain older and smaller, on average, than in other Asian countries. This signifies the need for more intensive strategies to induce modernization of the country's fleet. In terms of maritime safety, significant difference in maritime safety indicators is yet to be observed, despite government efforts to curtail the frequency maritime accidents.

Keywords: domestic shipping, competition, deregulation, maritime safety

Table of Contents

1. Introduction 1
The domestic shipping industry before policy reforms 1
Criticisms and previous findings 3
More recent findings 4
2. Policy interventions 5
I. Goal 1: To induce market competition 5
II. Goal 2: To encourage investments 9
III. Goal 3: To improve maritime safety 11
3. Market indications 14
4. Conclusion and recommendations 26
References 28

List of Tables

Table 1. Statistics on special permits and approved request for acquisition of vessels for domestic use, 2000 to 2011 17
Table 2. Comparative statistics on maritime vessels, select Asian countries in 2021 18
Table 3. Characteristics of firms in sea and coastal water transport 19
Table 4. Indicators of market structure in inter-island water transport (passenger) 21
Table 5. Indicators of market structure in inter-island water transport (freight) 21
Table 6. Statistics on maritime accidents, 2001 to 2014 25
Table 7. Causes of maritime accidents, 2015 to 2019 26

List of Figures

Figure 1. GDP per capita (at constant 2015 US$) 15
Figure 2. Total domestic cargo (in metric tons) 15
Figure 3. Passenger traffic in domestic shipping and total country population 16
Figure 4. Growth of domestic operating merchant fleet (in number), 1995 to 2009 16
Figure 5. Growth of domestic operating merchant fleet (in number), 2009 to 2018 17
Figure 6. Number of firms in sea and coastal water transport 19
Figure 7. HHI for cargo, ports under CPA, 1998 versus 2020 22
Figure 8. HHI for passengers, ports under CPA, 1998 versus 2020 23
Figure 9. Concentration index, CPA, 2020 24

Government Interventions in the Domestic Shipping Industry: A Discussion on Market Competition and Maritime Safety

Kris A. Francisco[1]

1. Introduction

The economy of an archipelagic country such as the Philippines depends highly on industries that facilitate physical connectivity. The domestic shipping industry in particular, encapsulates this role by serving as a main facilitator of domestic trade and at the same time, a provider of affordable inter-island transfer. These crucial functions in the economy are exceedingly evident in the 2019 report of the Philippine Statistics Authority where it was reflected that 99.9 percent of domestic trade, equivalent to 25.89 million tons of goods, were transported via water. In the same year, 28.13 million passengers, equivalent to 25 percent of the total population[2], were also tagged to have utilized water transport for inter-island travel. Against this backdrop, however, is an industry riddled with inefficiencies that lead to other issues such as high cost of shipping, ageing vessels, poor quality passenger and cargo shipping services, as well as frequent maritime accidents. Unfortunately, the main consequence of a poor-performing domestic shipping industry is slower economic growth and regional integration. Inconveniences caused by the domestic shipping industry were met with a strong clamor for government intervention that eventually resulted in a long history of policies aiming for better, safer, and affordable shipping services in the country. In this paper, we examined how the Philippine domestic shipping industry evolved over more than two decades of policy interventions. We particularly reviewed the policy evolution starting in the 1990s to present and track some market indications of progress using available data. We categorized government interventions into three categories, namely: (1) market competition, (2) private investments, and (3) maritime safety as most policies were designed around these goals.

The domestic shipping industry before policy reforms

The study of Austria (2003) provides an overview of the Philippine domestic shipping industry prior to policy reforms, jumping off from the findings of earlier studies[3]. The following discussion summarizes the important points raised in the aforementioned study.

Background

Regulations in the industry was first introduced during the American rule, encompassing both rate determination and route entry for the primary purpose of protecting both the consumers—against indiscriminate charging; and operators—against ruinous competition as well as to balance shipping demand and capacity within the economy. Regulation of the maritime industry was originally assigned to the then Board of Transportation (BOT) but was

[1] The author is grateful for the research assistance of Valerie Lim, Research Analyst in the Philippine Institute for Development Studies.

[2] Total population in 2019 reached 110,380,804 based on World Development Indicators data of the World Bank.

[3] Studies include: Interisland Shipping Regulation Study by Renardet Sauti Consulting Engineers (1986); Presidential Task Force (PTF) on Interisland Shipping Industry (1989), Philippine Transport Sector Review (1990); and the studies Nathan Associates, Inc., Interisland Liner Shipping Rate Rationalization Study (1991) and Liner Shipping Route Study (1994).

later transferred to the Maritime Industry Authority (MARINA)[4] by virtue of Executive Order 1011, where MARINA assumed all the quasi-judicial functions of the BOT related to water transport.

Rate determination for the domestic shipping industry was first managed by the government. Rates were based on two factors namely: (1) the type of commodity or passengers, and (2) the distance between the ports of origin and destination. Commodities were originally classified into three: Class A—for processed goods and high-value manufactured goods; Class B—for semi-processed goods and low-value manufactured goods; Class C—unprocessed commodities, and Basic—includes rice, corn, corn grits, palay, livestock, fruits, and vegetables (Austria 2003). Passengers on the other hand, were classified based on the quality of services and type of accommodation offered to them. The classifications are: First class, Second class and Third class. There is also an alternative to class-based rates for cargo, wherein operators can opt to use ad valorem rate for high-value goods –those that are valued over PHP 1,000 per ton.

Rate adjustments for the domestic shipping industry were based on the revenue deficiency method, where adjustments are made to produce the desired revenues of liner operators to achieve the rate of return for their investments. Under the Public Service Act of 1936, the maximum allowable ROI for public utilities is 12 percent. The revenue deficiency method involves the comparison of required revenue of operators and the actual revenue the shipping operators are getting; the resulting difference is the deficiency in rates which will be adjusted across-the-board. MARINA's computation for the overall revenue required for the whole domestic shipping industry is based on the audited financial statements of all members of the Domestic Shipping Association.

Route licensing was introduced in 1972 after problems of imbalance capacity affected the domestic shipping industry. Overtonnaging became a problem in major routes while inadequate service or no service at all, was persistent in minor routes. Prior to policy reforms, regulations in the domestic shipping industry were very rigid and overly protective of incumbent operators. The grandfather rules were the prevailing principles followed when granting a certificate of public convenience (CPC)[5] to operators. Route entry was difficult because priority was given to existing authorized operators to fill additional needs in a certain route. When the need for additional services was identified, franchised operators were given the first opportunity to add vessels to fill the demand. When unable to do so, it is only then that the application of a new operator will be approved. Conversely, the rules that persist in developmental routes highly reward the operator by ensuring protection of his investment until such time that he reaches the target ROI. This means that no other operator is allowed to operate on the same route. Moreover, the number of years for this protection is unlimited.

[4] The Maritime Industry Authority was created in 1974 via Presidential Decree No. 474, with the goal of integrating the development, promotion, and regulation of the country's maritime industry.

[5] A Certificate of Public Convenience (CPC) is an issued authorization provided by MARINA to allow operation of a domestic vessel to provide shipping services to the public.

Criticisms and previous findings

The were a lot of criticisms about how the government determined rates pre-policy reforms. For instance, the study of Austria (2003) noted that the rate differentials among classes was incapable of representing the true cost of providing services for each commodity; and as a consequence, it resulted to the discrimination of some commodities and routes. The uniform rate formula for all routes also brought problems to the industry because it failed to consider the cargo balance and mixture of class commodities that contributed to market distortions. The problems in the rate structure and rate setting highly affected the producers and traders of agricultural commodities. The very low rates for basic commodities resulted in the reluctance of some operators to provide the needed services. To exacerbate things further, rates for basic commodities and third-class passengers were not permitted to increase in response to the inflation rate, for social considerations. Inevitably, as providing passenger services became less profitable, the quality-of-service standards for passengers also deteriorated. Worse, some operators resorted to overloading passengers to compensate for low returns, which has been blamed for the high incidence of maritime accidents in the country.

As with rate-setting, the rate-adjustment method for the domestic shipping sector received dispraise. A study of Balisacan (1989) criticized the method for guaranteeing profits even for inefficient operators, removing the pressure to provide better shipping services. Austria (2003) likewise pointed out that the method is heavily dependent on the financial statements of shipping operators alone and fails to include the load factors and level of efficiency of shipping operators in the computation. Moreover, the revenue deficiency method was faulted for the high shipping rates through the years, as it inadvertently incentivized operators to vertically expand their investments by adding more ships, further increasing the margin between actual revenue and the required revenue needed to attain the industry's target ROI.

The grandfather rules similarly received criticism as it did not consider the past service records of shipping operators (both incumbent and new applicant). The unlimited years of protection given to operators in developmental route was seen as a constraint to improving competitiveness within the industry. In 1973, another protectionist policy was implemented geared towards the protection of investment of incumbent shipping operators. Under the new policy, no new operators were allowed to enter the primary and secondary routes; and only one operator is allowed on tertiary routes. To achieve this rule for the tertiary routes, mergers and joint services were highly encouraged.

Unfortunately, overtonnaging was only moderately controlled by route franchising since the scheme only dealt with route-level capacity but not the capacity of industry as a whole (Austria 2003). The 12 percent cap on ROI, and the way the revenue deficiency method guaranteed profitability for shipping operators were considered contributory factors to overtonnaging in the industry. Overall, it was concluded that issues in the domestic shipping industry are consequences of government regulations that inadvertently allowed shipping operators to function inefficiently.

More recent findings

In 2014, the World Bank released a report entitled "Enhancing Competition Conditions and Competitiveness of the Philippine Domestic Shipping. This report provided a comprehensive review of the sector, which was characterized as having high cost, low quality of service and high incidence of maritime accidents. Domestic shipping in the Philippines was found to be more expensive than other two archipelagic countries, Malaysia, and Indonesia. As reflected in the report, logistics costs in the country account for 24–53 percent of the wholesale price. Businesses also cited delays in shipment and slow cargo handling as common problems encountered. In terms of maritime safety, the Philippines records the highest absolute casualty rate in the East Asian region. Several underlying reasons were identified for the domestic shipping's inefficiency. First, is the oligopolistic market structure. Second, is the low profitability despite improvements in the level of competition. Third, is the lack of investment in ships. Fourth, is the absence of market scale. Fifth, are other factors that exacerbate the problems such as "lack of connectivity, network planning and consolidation" (p. 30). Sixth, scarcity of port and road infrastructure. And lastly, the conflicting roles of the Philippine Ports Authority.

As explained in the World Bank report, removing market barriers that hinder competition would result in greater efficiency, improved services, capacity, and lower rates. However, intensifying competition does not mean having more competitors on individual routes. A high degree of concentration per route is considered a natural consequence of the market as this is a result of the economies of scale in ship operations and the value of frequency of shipping service. Hence, in seeking to improve competition in domestic shipping, it is important to allow the effective operation of the market and its market participants. Several recommendations to enhance the conditions of the country's domestic shipping were laid out in the report. The recommendations are related to (1) creating a level playing field; (2) facilitating greater competition between operators; (3) achieving efficiency and cost-effectiveness in terms of logistics; and (4) promoting better decisions. To level the playing field for existing shipping operators and potential entrants, the report recommended removing the incumbent shipping operator's power to object granting of CPC as this can be used to delay the entry of new competitors. A redesign of the CPC was also pushed to include provisions on standards, given that not all market participants are held to the same safety and environmental standards. Several recommendations were laid out to encourage competition between operators. First, is to streamline the processes involved in applying for a CPC to save on time and cost. Second, is to remove the distinction between "liner" and "tramper" vessels and utilize a single form of CPC. Third, is to allow greater flexibility within a CPC to let shipping operators adjust to market demands and opportunities. As mentioned in the report, shipping operators were required to specify their routes when applying for CPC. Any change in the route would require amendment to the existing CPC and would result in additional costs related to administrative processing. On the other hand, recommendations to improve efficiency and cost-effectiveness in logistics include: (1) the removal of the requirement for domestic ships to have their dry-docking, repair and maintenance activities in domestic shipyards because this limits competition for domestic shipyards while increases the cost for domestic shipping operators; (2) the removal of restriction on vessel importation to be used for domestic trade as this reduces the ability of firms to source their needs from more efficient producers; and lastly, (3) the approval of chartering foreign vessels to temporarily operate in domestic trade to help lower the cost as well as the risk for ship owners as this would allow them to test the feasibility of new routes or try new types of vessels without shouldering the full cost. It was also mentioned that a permit to bare-boat charter a vessel would likewise allow a Filipino shipowner to temporarily operate a foreign-flagged vessel in domestic trade. However, the policy uncertainty

related to the tax status of bareboat chartering is discouraging firms from engaging in the said activity. In addition to the recommendations, streamlining the role of the Philippine Ports Authority was identified as a means to improve the efficiency of domestic shipping. Instead of a percentage of revenue share, an annual fixed charge was suggested. Finally, steps to promote better decisions for market players were put forward. One is to consolidate data on cargo volumes and shipping services since better information would guide not only the market participants but the regulators as well. Second, is the free dissemination of information to facilitate more effective competition between market participants.

2. Policy interventions

The Philippine domestic shipping industry has been subjected to numerous policy interventions for many years, due to its critical role in the economy. Policy interventions can be categorized based on broad government goals aiming to induce market competition, increase investments, and improve maritime safety. The following sections provide a discussion on the policy evolution for each of the three categories of government interventions.

I. Goal 1: To induce market competition.

An oligopolistic market structure characterizes the Philippine domestic shipping industry, where only a few firms are dominating scheduled operations. Austria (2003), Llanto (2005) as well as the World Bank study (2014) consistently finds that almost all routes are being serviced by either one or two companies. The World Bank (2014) explains that this is a natural tendency of industry as it possesses several properties that lead to this outcome. First, is that economies of scale are important in shipping operation as costs such as those related to construction, repair and maintenance, crew, etc., are minimized as the operation becomes larger. Second, is that shipping operators compete through frequency of service as the reliability of shipping schedule is an important factor in attracting customers. Thus, the high degree of concentration of shipping operators, especially on major routes, is expected to remain as is. Given this, improving competition in the domestic shipping industry is not necessarily about having more competitors in individual routes, but instead, making sure that barriers to competition are removed or minimized, to induce greater efficiency in the industry that would hopefully translate to better quality of ships, services, increased capacity, as well as lower shipping rates and maritime accidents.

The World Bank report (2014) postulates that part of the reasons for the poor state of Philippine domestic shipping industry are constraints to competition that limit opportunities and incentives for new and incumbent players in the market. The government pursued two main strategies in improving the level of competition in the industry through: (1) the deregulation of shipping rates, and (2) the deregulation of route entry.

Deregulation of shipping rates. Policies geared towards deregulating shipping rates were meant to encourage operators to provide more shipping services, especially for commodities and routes where they are most needed. Restrictions on the way rates were determined were slowly lifted to allow the rates to be more competitive and adjust to market volatilities. From 1989 to the late 1990s, the government issued revised guidelines on the rate increase and alterations in the level and structure of inter-island shipping rates. As an initial step towards deregulation, Memorandum Circular (MC) 46 of 1989 abolished the charging of ad valorem

rates and reverted the process to class rates based on weight or volume basis, whichever is higher. A surcharge of 3/10% of the declared value of commodity was then added to the overall fee imposed on all classes, except those under the basic category. To induce more services for basic commodities, rice, palay, corn, corn grits, fruits, vegetables, and livestock were reclassified to class C as class C (basic), raising the prescribed rate equivalent to that of class C. One of the major conditions of MC 46 however, is that shipping operators allocate a minimum of 50% of their authorized capacity to third class accommodation. In 1990, another MC was issued, MC 57, to deregulate the rates for the following commodities: refrigerated, transit, and livestock. This reduced the list of basic commodities to include only rice, palay, corn, corn grits, fruits, and vegetables. Additionally, MC 57 introduced the use of the fork tariff system (FTS) for both passenger and freight rates. Under the FTS, prices were set within a margin of ±5% of the base rate, to allow some flexibility in the rate setting. Meanwhile, MC 59 of 1991 prescribed an increase in passage and freight rates of 12% and 8%, respectively. This was, however, quickly followed by a rollback of 6% on freight rates, as advised by MC 66 in 1992. The government adopted a fuel adjustment mechanism in 1992 through MC 67, to protect shipping operators from the impact of rising fuel prices. This MC prescribed a rate adjustment, which will be done by MARINA, in cases where fuel prices (ex. diesel, bunker, and fuel oil) increase or decrease by at least 10%. The margin for the FTS was further broadened to +10% (upper limit) and –15% (lower limit). The list of deregulated commodities expanded even more with MC 80 of 1993, where fruits and vegetables shipped in ventilated containers were included. The classification class C (basic) was also abolished and commodities under it were moved to class C. As part of the provisions of MC 80, vessels serving Department of Tourism-identified priority links are exempted from the requirement of 50% allocation to third class passengers; their passage rates are also deregulated. Executive Order (EO) 213 was issued in 1994, prescribing major deregulation of domestic shipping rates. The EO recommended the deregulation of passage rates for first and second class for all passenger-carrying domestic vessels. Rates for third class accommodation however, remained under the directive of MARINA. Likewise, freight rates for all classes of commodities are deregulated, except for non-containerized basic commodities, which was still under the regulation of MARINA along with the rates for monopolized/cartelized routes. The implementing rules and regulations of EO 213 was contained in MC 117 released two years later, in 1996. MC 117 clarified that the fork tariff rate with the bandwidth of +10% (upper limit) and –15% (lower limit) from the prescribed reference rate is applicable to all rates that remain regulated by MARINA. The MC also prescribed the formation of Domestic Shipping Consultative Councils (DOSCONs)[6] in major maritime centers where MARINA regional offices are located, to ensure that all parties that will be affected by rate adjustments will be heard. The main role of DOSCONs is to provide an avenue for consultations and negotiations related to the implementation of deregulated rates. Hence, shipowners/operators need the approval of the concerned DOSCONs on the rate level it intends to adopt. A revised set of rules and regulations on implementing deregulation of domestic shipping rates was issued in 1999 via MC 153. Under this circular, the process for the adoption of deregulated rates will only be between the shipowners/operators and MARINA, effectively eliminating the need for DOSCONs. Shipowners/operators were instead required to file a formal notice with MARINA for the adoption of deregulated rates, indicating details such as covered vessels, authorized routes, authorized rates per link, etc. This simplified the process for rate-setting. A notification

[6] DOSCONs are composed of ***regular members*** from the service provider group (ship owners, ship operators, shipping associations), service user group (consumers group, shippers' association), government regulatory body (Philippine Shippers' Bureau, Department of Trade and Industry); ***ex-officio-members*** from appropriate government body (Maritime Industry Authority, Local Government Unit); and ***guest members*** (representatives from other concerned groups).

for an upward/downward rate adjustment will likewise need the approval of MARINA, coupled with the requirement of publishing the notice of rate adjustment in national and local newspapers.

Deregulation of route entry. The liberalization of entry and exit in the domestic shipping industry was first initiated in 1992 through the release of MC 71. This circular was meant to increase the level of competition in terms of rates and quality of services offered in domestic transport operations. It recommended the opening of monopolized routes to additional operators such that each route shall have a minimum of two operators. The protection afforded for operators in developmental routes was also limited to a maximum of 5 years; after which, the route will be opened for entry of additional players. MC 71 further enhanced the flexibility in shipping operations by allowing existing operators to increase their capacity either through replacement of bigger vessels or add frequency of service. There was no prescribed limit on the capacity of the replacement vessels. Under MC 71, operators were permitted to amend their routes, schedule and sailing frequency, so long as there exist no conflict with those of existing operators.

In 1992, MARINA released MC 68 to set the guidelines on the issuance of special permits for foreign-registered vessels to be used for domestic trade. This is in support of the development and expansion of the country's domestic fleet. Under MC 68, foreign-registered vessels were allowed to be temporarily utilized for domestic trade under the condition that they secure a special permit, valid for a period of 30 days, with possibility of extension or renewal. A special permit can be issued if there is no available suitable type or tonnage of vessel domestically. For vessels with foreign crew, a special work permit from the Bureau of Immigration is additionally required if the stay is less than 30 days, otherwise, alien employment permit is to be secured from the Department of Labor and Employment with MARINA's endorsement if the stay will take longer.

MC 80 issued in 1993 provided the policy guidelines related to the regulation of domestic shipping services. As specified in this circular, part of MARINA's strategy to encourage entry of operators into developmental routes is to incentivize them through the provision of authority to charge rates that are different from the fork tariff rates. The main condition for this incentive is that the operator provides a certain level of new technology in shipping or a new type of shipping service in a developmental route. The rates proposed by the operator will, nonetheless, still need to go through MARINA's evaluation. Another notable feature of MC 80 is that it deregulated the entry of newly acquired vessels into routes that are already serviced by other operators as long as the operation will initiate innovative and technologically advanced and cost-effective shipping services (ex. fast ferries, RORO vessels) in the specific route being applied for, and there is a need for additional services (among many other conditions). Additionally, exit from the industry was allowed under MC 80. Operators wishing to withdraw or suspend their services were required to file a notice with MARINA, 15 days after public announcement. In the case of suspension of services due to marine casualty, major machinery damage, or other fortuitous events, operators were required to file a notice with MARINA 15 days after the incident and specify the resumption schedule. Unauthorized abandonment/withdrawal/suspension of shipping services for 4 months or more forfeits the operators' right to his operating permit or certificate.

The government's liberalization efforts in the domestic shipping industry were further reinforced through the issuance of EO 185 in 1994. It contained all the salient features of MC 80, with an additional condition for opening all routes. More specifically, the EO directed that all routes or links serviced by any operator for a combined period of 5 years, are qualified to be opened to new operators without limit. The implementing rules and regulations of EO 185 were released in 1995 via MC 106. Some intrinsic parts of the circular are that new operators were allowed to offer a time schedule earlier than those of existing operators if there is a need of the shipping services at the proposed time. Vessel replacement or substitution was not only allowed not only for bigger vessels but also for downsizing. This step would, however, result in the revocation of the CPC and permit the previous vessel to be replaced. In addition, MC 106 allowed existing operators to deploy additional vessels, which would require application with the MARINA to increase their capacity.

In 1999, MARINA expanded the type of passenger accommodation by introducing the second-class non-air-condition type through MC 150, in cognizance of a more appropriate and realistic preferences of passengers. Through this step, shipowners and operators were provided another window from which they can expand their market opportunities.

Firmer conditions for approving requests for amendment or change in the routing patterns of shipping operators were laid out in 2000 via MC 161. This circular stated that operators shall only be allowed to change their routing pattern if the previously authorized route/link has been serviced for at least 1 year. This is to secure available shipping services for users. Furthermore, MC 161 introduced another type of permit; the special permit (SP), which will be given to an operator under several circumstances such as emergency/calamity situation, trial run, vessel conduction, etc., valid for a minimum of 30 days and renewable up to a maximum of 90 days per vessel or year. SP for drydocking or replacement of major parts is up to 6 months. The SP is beneficial both for the users and shipowners; for users—to have enough services when most needed, and for shipowners—to have the chance to test the market without having to invest heavily, as compared with that of long-term operation.

In 2011, MC 04 reiterated that foreign-registered ships were permitted to operate within national waters through a special permit. Under the circular, a SP will be given if there is no readily available and suitable Philippine registered-ship that is capable of meeting the required specifications of the shipper or consignee. The goal of issuing MC 04 is to ensure the provision of needed shipping services in support of efficient trade and commerce, delivery of crucial services or commodities, as well as infrastructure and development projects (ex. oil exploration projects) in the country. SP issued for the carriage of cargo or passenger have a maximum validity of 6 months per issuance; not exceeding 1 year in total. On the other hand, SP for other types of foreign ship have a longer validity, depending on MARINA's evaluation, but does not exceed two years in total. The guidelines for acquiring SPs were also revised through the issuance of MC 02 in 2017. In this circular, applicants were required to indicate in specific details such as services they propose, the project that will be using their service, area of operation, etc. Special provisions were also included for those involved in petroleum exploration and operation.

II. Goal 2: To encourage investments.

To complement the deregulation efforts, the government pursued several initiatives to attract private investments in the domestic shipping industry by improving the operating environment. The end goal of these efforts is to support the expansion and modernization of the country's domestic fleet. To provide context to the issues faced by shipowners and operators, MARINA's situation report released in 1998[7] revealed that among the cited reasons of ship owners for their inability to deliver quality services to the public is: (1) the lack of flexibility to respond to market incentives due to restrictive government regulations, and (2) the lack of financial assistance and incentives, given the capital-intensive nature of the shipping industry. The following discussions review the government's efforts in improving the operating environment in the domestic shipping industry, as well as some endeavors to support the modernization of the domestic fleet by providing incentives to shipowners and operators to invest in more technologically advanced vessels.

Improving operating environment. Executive Order (EO) 493 issued in 1991 reinforced the government's commitment to remove inefficiencies in domestic inter-island shipping. As acknowledged in the EO, the domestic shipping industry is one of the most regulated industries by the government involving 15 agencies in the operation, 8 of which requiring numerous clearances for every arrival or departure of domestic vessels. With EO 493, the government removed unnecessary and redundant procedures that increased the cost for operators. Government agencies that required domestic vessels were asked to delegate the function to the PPA. The required copies of coasting and passenger manifests needed for the clearance were also reduced to only three copies instead of seven, to further simplify the process related to the departure and arrival of domestic vessels.

To fast-track the provision of shipping services where they are needed, MARINA granted provisional authority (PA) to operate to shipping operators waiting for final decision on their CPC through MC 80 in 1993. The circular reduced the waiting time for operators and allowed vessels to operate by way of a PA, provided there is an urgent need for the service. Uncontested CPC applications were granted 1 year validity for their PA; while contested CPC applications were granted 6 months with an additional 6-month extension. The same circular also recognized the need to liberalize cargo liner operations since the demand is not as strong as that of passenger liner service. MC 80 enhanced the flexibility of cargo service operations by allowing swapping, substitution, or changes in sequence of port calls of purely cargo liner vessels. This move was aimed at improving the utilization of domestic vessels, as well as the efficiency and response in providing cargo services to the domestic market.

Liberalization policy was likewise extended to vessel acquisition for domestic operations. Age and size restrictions for any type of vessel acquired for domestic operation was lifted through MC 104 of 1995. In place of the previous restrictions, MARINA alternatively required vessels that will be acquired to be classed by a recognized international classification society, prior to its deployment.

[7] See Lorenzo, E. (1998). The Domestic Shipping Industry of the Philippines: A Situation Report. Maritime Industry Authority, retrieved from http://marinaph.freehostia.com/report/domestic/domestic98.pdf, on March 13, 2023.

Providing incentives. In 2000, a revised version of guidelines for implementing EO 185 was released via MC 161. This circular presented a new type of operation named "pioneering operation", with the afforded incentives meant to encourage operators. Pioneering routes are defined as those that do not have existing services or are abandoned by previous operator; or routes/links that are considered developmental as far as the introduction of new type of shipping service or technology is concerned. As part of the incentives, operators who will service a pioneer route are allowed to adopt deregulated rates and will be given protection of investment for a certain period that will be determined by MARINA; but with a maximum of 5 years protection.

The issuance of RA 9295 of the Domestic Shipping Act of 2004 was a great triumph for the domestic shipping industry as the government declared as part of its policy to provide necessary assistance and incentives to support the continued growth of the Philippine domestic fleet. To encourage investments in the domestic shipping industry, value-added (VAT) tax exemptions were granted to qualified shipping operators on the importation or local purchase of passenger or cargo vessels that are 150 tons and above, including their spare parts. The revised version of the IRR for the Domestic Shipping Development Act, however, limited this provision to only MARINA-registered domestic shipowners or operators. The main condition of availing the tax exempt is that vessels should be able to comply with the age requirement, which is 15 years for passenger and cargo vessels, 10 years for tankers, and 5 years for high-speed passenger crafts.

In 2009, a circular was issued to support the expansion of the RORO terminal system of the Strong Republic Nautical Highway. MC 23 laid out the rules in granting of "missionary route operator status" for RORO and similar type of vessels. As in pioneering routes, incentives were provided for operators in the missionary route for RORO vessels. As part of the incentives, operators are given protection of investment until ROI is achieved, for an indefinite period. They are also granted a 50% discount on regular fees in all renewal of documents, licenses, certificates and permits during the period of protection. A revised set of guidelines for granting RORO missionary status was released in 2019 through MC 02. A noteworthy feature of the guidelines was the reduction of the years of investment protection awarded to operators from an indefinite period to only a maximum of five years.

To further induce modernization, improvement and upgrading of the domestic merchant fleet, the grant of "pioneer status" was granted through MC 04 of 2015. The circular is meant to encourage the use of internationally-classed vessels in domestic shipping operations to improve safety, efficiency and quality of services. Domestic operators intending to invest in either brand new or newly-constructed ships that is IACS classed, for transporting passengers, cargo or fuel products are given numerous incentives such as (1) protection of investment for a total of six years, (2) priority in the issuance of CPC by MARINA, (3) a 50 percent discount on regular fees for all applications and renewals of documents, licenses and permits, and (4) entitlement to a special ramp or berthing facility[8] suitable to their vessel.

[8] Subject to existing policies of the Port Authorities.

III. Goal 3: To improve maritime safety.

The Philippines is home to some of the most tragic maritime accidents in history[9]. In fact, a paper released by Golden and Weisbord in 2016, reveals that 50 percent of the 232 ferry accidents recorded from 2000 to 2014 that claimed the lives of 21,574 people, occurred in Bangladesh, Indonesia, and the Philippines. Given the number maritime disasters that transpired in the country throughout the years, the government embarked on a mission to improve maritime safety to protect property and life at sea. The following discussion centers on the policies implemented by the Maritime Industry Authority (MARINA) on the domestic shipping industry. MARINA is the country's main government agency mandated to oversee the development, promotion, and regulation of the country's maritime sector. A review of MARINA's memorandum circulars reveal that government policies geared towards improving maritime safety in the country starting 1990 to present, are related to: (1) improving passenger safety and awareness, (2) increasing safeguards to ensure vessel seaworthiness, (3) improving accountability of shipowners, operators, and officers of the ships, and lastly, (4) ensuring competence as well as good working condition for ship personnel.

Improving passenger safety and awareness. To enhance the safety of passengers, MARINA issued several circulars mandating ship owners and operators of domestic passenger and cargo vessels to conduct information campaigns, intended to improve the awareness and preparedness of passengers in times of maritime emergencies. For instance, MC 72 of 1992 required all domestic vessels above 250 gross tons that are carrying passengers to conduct a 10–minute film showing the safety, health, and sanitation features of vessels. Similarly, MC 08 issued in 2008, advised all passenger ships with open deckhouse accommodation to have a Public Address system for safety measure announcements. Smaller vessels of 20 to 150 GT operating within riverine and coastal areas were likewise required to play a voice tape on safety, health, and sanitation features of their vessels.

On the other hand, motorized boats and similar vessels were mandated to compel their passengers to either wear or hold their life jackets at all times to minimize casualties in times of maritime emergencies, through MC 123 of 1997 and MC 135 of 1998. MC 176 of 2002 reiterated that all shipowners and operators should ensure that their passengers are wearing safety vests from boarding to the point of destination. Crew members were required to conduct a demonstration on how life vests are used and go through a list of reminders on the dos and don'ts during emergency situations. Both the master of the vessel and the shipowner will face sanctions and penalties for violations of any of these provisions. In conjunction with these measures, MC 175 issued in 2002 required all motor bancas with open-deck accommodation to display their maximum authorized passenger capacity on the freeboard side, visible for passengers to read.

[9] For example, the case of MV Dona Paz incident that resulted to 4,000 lost lives. Dubbed as Asia's version of Titanic: https://www.gmanetwork.com/news/newstv/newstvspecials/285180/25-years-after-the-sinking-of-mv-dona-paz-gma-news-tv-airs-asia-s-titanic/story/. The MV Princess of the Starts likewise sank in 2008, leaving more than 400 passengers dead as it sailed through the area directly affected by Typhoon Frank (international name): https://www.rappler.com/environment/disasters/97429-disaster-mv-princess-stars-sulpicio-lines/.

Increasing safeguards to ensure vessel seaworthiness. The main strategy undertaken by MARINA to enhance the seaworthiness of vessels involved in domestic operations is to raise the safety qualifications and maintenance requirements imposed on shipowners and operators. This particular area of policy intervention related to maritime safety has received the most government attention, as evidenced by the number of related memorandum circulars.

As a starting point, the guidelines for vessel safety regulations were provided in MC 89 of 1994. The circular specified that vessel plans related to construction, conversion, alteration, rehabilitation as well as for acquisition should be submitted to and approved by MARINA. All Philippine-registered vessels will also be inspected by MARINA to verify compliance with the revised Philippine Merchant Marine Rules and Regulations (PMMRR). Random inspections are conducted to ensure compliance and maintenance of established rules and regulations. In 1995, Philippine-registered vessels involved in carrying passengers were given a prescribed list of preventive safety measures to adhere to, via MC 114. The safety measures are related to escape or emergency exits, handling and storage or hand carried luggage, storage of life vests, closure of doors, portholes, ramps, and manholes to protect passenger safety, wearing of uniform by the ship officers and crew (for easy identification during emergencies) and other safety measures. The circular stipulated that the master of the vessel is the one responsible in ensuring strict obedience to the rules. However, both the master of the vessel and the shipowner/operator will face sanctions and penalties if any of the provisions are violated.

A big step in inducing a culture of safety as well as environment protection in domestic shipping is the implementation of the international safety management (ISM) code in 1999 through MC 143. Through this circular, shipowners/operators were required to adopt and implement a Safety Management System (SMS), and secure ISM certification from MARINA or any recognized organization. Essentially, ships were compelled to conduct safe practices related to their operations, provide a safe working environment for their crew, establish safety measures against risks and continue to improve the safety management skills of their ship personnel. This covered passenger high-speed crafts, passenger-carrying ships, oil and chemical tankers, gas carriers (500GT and above) and bulk carriers (500GT and above).

MARINA also released additional regulations on inspection drydocking and statutory certificates through MC 152 of 1999, to guarantee vessel safety. The circular required all registered ships in the country to secure a number of certificates[10] prior to deployment. Drydocking is also compulsory; for classed ships—twice within 5 years, while non-classed and wooden-hulled ships (passenger or passenger-cargo)—annually. Ships involved in grounding, collision or hitting incidents are required to go through emergency dry-docking.

In 2000, MARINA institutionalized the adoption, implementation, and maintenance of a Safety Management System (SMS) by shipping companies, through the approval of the National Safety Management Safety Code guidelines on the implementation of the National Safety Management Safety Code as stipulated in MC 159. The goal of this move is to ensure the competence of shipping personnel in all aspects of ship operation, initially covering steel and wooden hull ships not required to be classed. The revised rules and regulations issued through

[10] The following are the requirements: Certificate of Inspection, Passenger Ship Safety Certificate (PSSC), Cargo Ship Safety Equipment Certificate (CSSEC), Cargo Ship Construction Certificate (CSCC), Cargo Ship safety Radiotelegraphy Certificate (CSSRC), Cargo Ship Safety Radiophony Certificate (CSSRC), Exemption Certificate (EC), Manning Certificate (MC), International Tonnage Certificate (ITC), Loadline Certificate (LC); and other certificates based on the provisions of national laws, rules and regulations and international maritime conventions and resolutions.

MC 11 in 2015 meanwhile, broadened the scope of the circular to include all ships used for domestic operation except for war and naval ships, those owned by the government, small vessels of not more than 12 person-capacity, fishing vessels, sailing ships and pleasure crafts. Foreign-registered ships temporarily operating in domestic waters were also required to have a SMS compliant with the ISM code.

MARINA initiated the gradual phase-out of wooden-hulled ships in domestic operations in 2003, through MC 190, to induce modernization and raise the level of safety for passengers. Some exemptions are given to ships belonging to 3–35GT category and those that are utilized in DOT-identified tourist destinations (travel time port-to-port shall not exceed one hour), as well as fishing vessels. Fishing vessels, on the other hand, were prohibited to carry passengers or operate for commercial purposes. The issuance of MC 190 started the prohibition of wooden-hulled ships in routes already serviced by steel-hulled, aluminum, fiberglass, or other more technologically advanced type of vessels. To complement these efforts, MARINA released a list of requirements for the construction of wooden-hulled ships, including boats with outriggers in 2011, through MC 01, to ensure the safety of the remaining wooden ships plying the domestic waters.

As an additional safety measure, MARINA prescribed the installation and implementation of ship radar and reflector (SRR) for all vessels engaged in domestic operations. MC 03 issued in 2014 specified that having SRR will be included as a requirement for issuing ship safety certificates. On the other hand, the issuance of MC 07 in 2015 established a set of standard procedures for approving ship plans, conducting construction survey and issuing construction certificate to ensure that all vessels constructed, altered, or re-built in the Philippines follow the safety standards of MARINA. Moreover, MARINA released the rules and regulations on subdivision and damage stability requirements for domestic ships via MC 08 of 2015 to foster safe operation of domestic vessels.

Improve accountability of shipowners, operators, and officers of the ship. Several issuances were also designed to improve the accountability of shipowners, operators, and officers of the ship in case of maritime accidents. As protection to passengers, MARINA increased the minimum amount of compulsory passenger insurance coverage from PHP 50,000 to PHP 100,000 per passenger, covering all ticketed and un-ticketed, including minors (regardless of age) passenger of the vessel, through MC 149 of 1999. This circular is applicable to high-speed crafts and passenger carrying vessels, other vessels, and motor banca below 35 GT.

Meanwhile, MC 13 of 2009, provided an additional penalty for passenger-carrying ships involved in maritime incident/accident, found to carry passengers in excess of their authorized capacity. The circular required all passengers to be documented in the Passenger Manifest. If found guilty, the shipowner/operator will face one year suspension of CPC. Violation of the order of suspension will result to perpetual disqualification from operating ships.

In 2016, passenger insurance was further raised to PHP 200,000 per passenger and only ships with insurance coverage for its passengers were allowed to operate domestically. As per MC 01 of 2016, shipowners and operators will need to submit proof of insurance coverage for its passengers, or the number of persons allowed onboard annually.

Ensure competence and good working conditions of ship personnel. To further ensure maritime safety, MARINA, through MC 179 of 2002, required all Philippine-registered ship to secure a Minimum Safe Manning Certificate as guarantee that a ship is safely manned when proceeding to the sea. A revised guideline for minimum safe manning for ships in the domestic waters was released in 2012 through MC 06. The circular prescribed the presence of medical personnel onboard (the number will vary based on the no. of passengers and duration of voyage) for illnesses or loss of life onboard. MARINA also obliged ships to implement a safe maximum number of work hours for its personnel. A record of hours of work performed by personnel is required to be maintained for monitoring purposes.

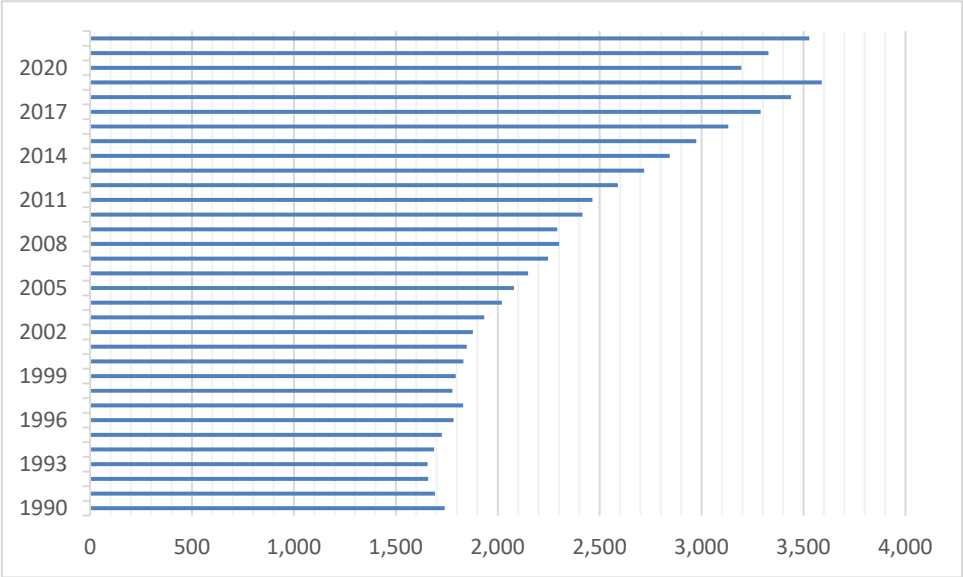
To minimize the occurrence of accidents at sea due to mishandling or shipping vessels, random drug and alcohol testing on all personnel serving onboard domestic ships (at least 3 GT) is put forward by MC 191 of 2003. Personnel found to be under the influence of drugs or alcohol shall have their SIRB and QDC suspended at first offense and the complete cancellation of SIRB and QDC on succeeding offenses with recommendation for PRC license revocation. Shipping companies will also be sanctioned by means of suspension or cancellation of PA/CPC.

3. Market indications

As discussed in previous sections of this paper, the government spent the 1990s and the early parts of 2000s crafting policies aimed to address issues on the lack of market competition and private investments in the domestic shipping sector. Simultaneously, the government also pursued steps to improve maritime safety given the alarming number of maritime disasters in the country—a policy goal that remains relevant until today. More than two decades after the policy interventions, it remains to be proven whether the policies were effective enough to induce changes that were envisioned for the domestic shipping sector. In a desired setting, good-quality, complete and accessible data would enable researchers to assess whether the policies led to progress. However, in reality, data on the domestic shipping industry is sparse, only available at the aggregate level, and difficult to harmonize. With this constraint, full attribution to policy changes is difficult to achieve. Nonetheless, all these policy changes have contributory effects to creating an environment that shapes how the domestic shipping industry is, currently. Given limited data, the following discussion attempts to look at the changes in the domestic shipping industry for more than two decades, to find possible indications of progress related to market competition, investments, and maritime safety.

The Philippine economy has risen rapidly since the 1990s. While the COVID-19 pandemic affected the country in 2020 and slowed the economy down, figures for 2021 and 2022 are exhibiting signs of resurgence. Taking into consideration the growth in population over the years, data shows that the average well-being in the country, as crudely represented by per capita GDP, is significantly higher today than it was more than two decades ago (Figure 1).

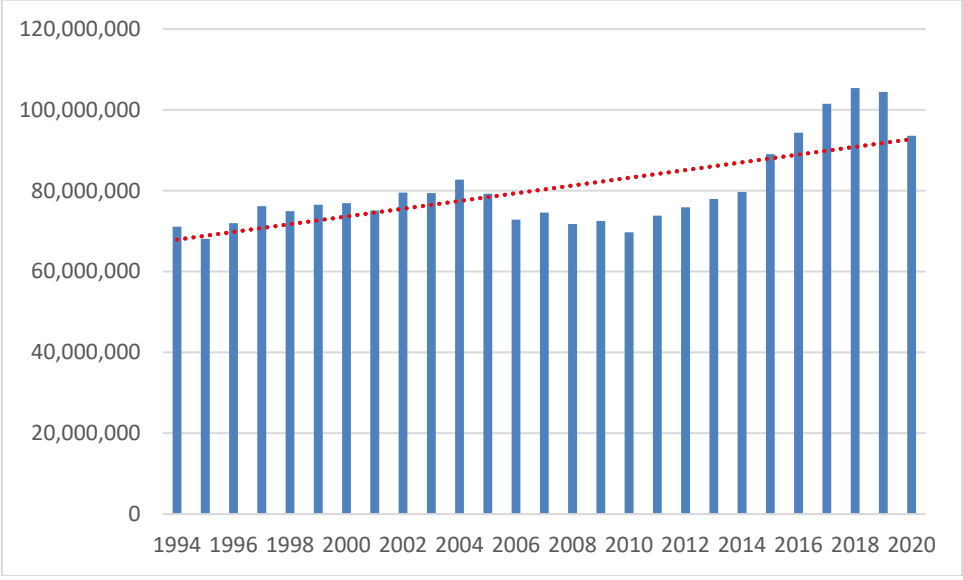
Figure 1. GDP per capita (at constant 2015 US$)



Source: World Development Indicators

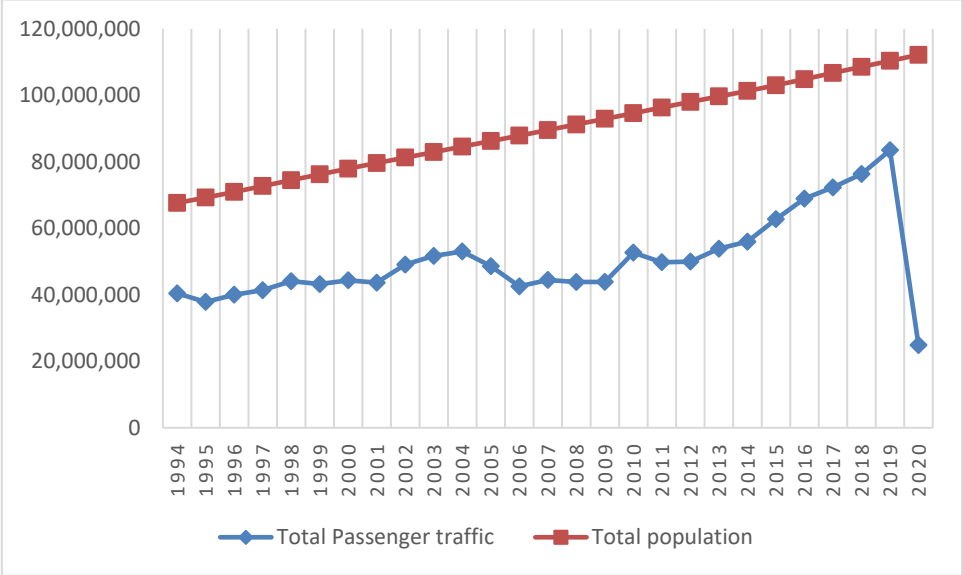
Consistent with this trend, is the concurrent increase in economic activities, highly evident in the growth of demand for domestic cargo and passenger services (see Figures 2 and 3). As the population grew, passenger traffic in the water transport sector also expanded (Figure 3); with the volume of annual passengers ranging from 55 to about 76 percent equivalent of the country's total population. Similar to Figure 1 however, Figure 2 demonstrates the effect of COVID-19 pandemic on the domestic shipping industry through a huge drop in the number of passengers in 2020.

Figure 2. Total domestic cargo (in metric tons)



Source: Philippine Statistical Yearbook (various years)

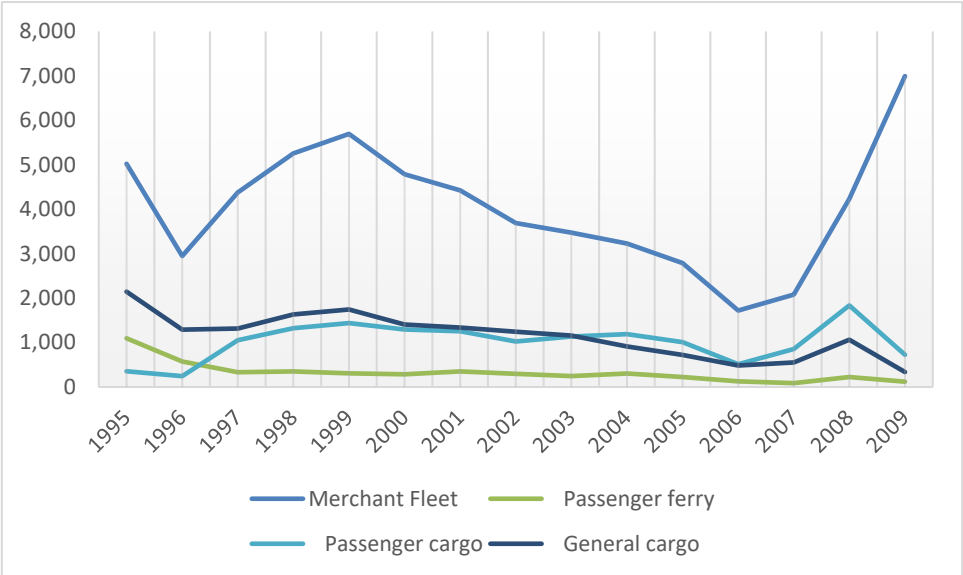
Figure 3. Passenger traffic in domestic shipping and total country population



Source: Philippine Statistical Yearbook (various years)

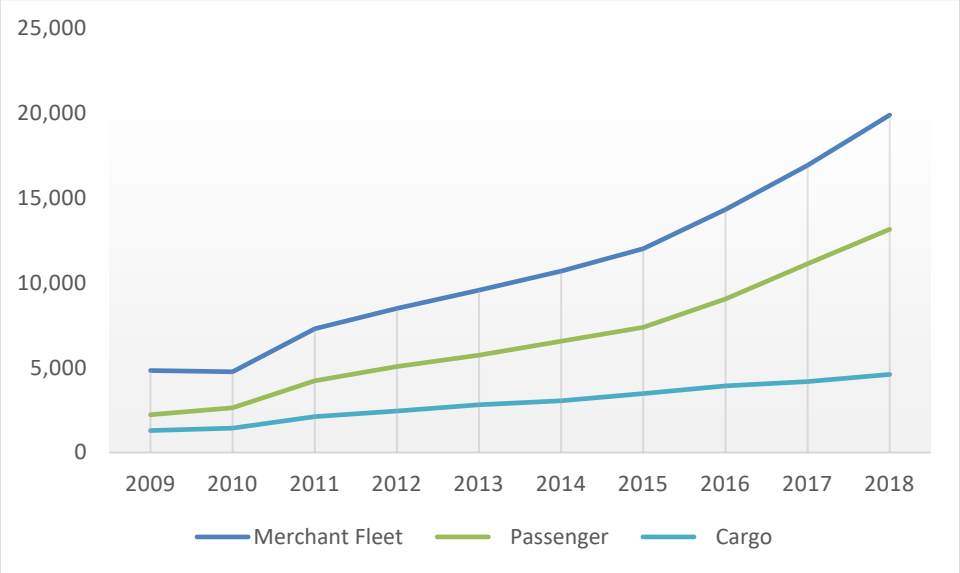
Interestingly, the growth in demand for cargo and passenger services was met by an increase in the number of vessels operating domestically. As presented in Figures 4 and 5, the total operating domestic merchant fleet in 1995 is only about 5,000 ships, while the number has grown to almost 20,000 ships in 2018. Figure 5 likewise suggests that the steady and strong increase in the number of passenger and cargo vessels started around 2010, and that the number of passenger vessels is consistently higher than the number of cargo vessels over the period of 2009 to 2018.

Figure 4. Growth of domestic operating merchant fleet (in number), 1995 to 2009



Source: Philippine Statistical Yearbook (various years)

Figure 5. Growth of domestic operating merchant fleet (in number), 2009 to 2018



Source: Philippine Statistical Yearbook (various years)

Data from MARINA accomplishment reports implies that the provision of special permits to foreign-vessels was instrumental in expanding the number vessels for domestic operations. As shown in Table 1, the granting of special permits to overseas vessels was relatively higher between 2000 to 2002. Importation of vessels was also greater in 2009 to 2011, coinciding with the years where growth in the number of domestic passenger and cargo vessels were observed (recall Figure 5). In addition, the bare-boat chartering arrangement also seems to have encouraged more investment in domestic shipping vessels.

Table 1. Statistics on special permits and approved request for acquisition of vessels for domestic use, 2000 to 2011

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
SP issued to oversees vessels deployed for domestic trade	**126**	**118**	**103**	**44**	**41**	**40**	**30**	**28**	**36**	**44**	**33**	**55**
Domestic vessels approved for acquisition (including fishing vessels)	**100**	**121**	**104**	**104**	**123**	**71**	**83**	**68**	**104**	**158**	**125**	**180**
Bareboat	*15*	*22*	*25*	*-*	*-*	*-*	*-*	*-*	*29*	*6*	*11*	*18*
Importation	*74*	*78*	*62*	*87*	*99*	*66*	*78*	*45*	*71*	*133*	*114*	*162*
Local construction	*11*	*21*	*17*	*17*	*24*	*5*	*5*	*23*	*-*	*-*	*-*	*-*
Lease purchase/ Lease Irrevocable Purchase	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*4*	*19*	*0*	*-*

Source: MARINA accomplishment report (various years)

Despite these observed changes however, latest comparative data conveys that efforts on encouraging investments in the domestic shipping industry should still be intensified as our vessels remain relatively older and smaller than that of other Asian countries (Table 2). These characteristics of shipping vessels not only have disadvantages in terms of trade, but also have complementary safety implications.

Table 2. Comparative statistics on maritime vessels, select Asian countries in 2021

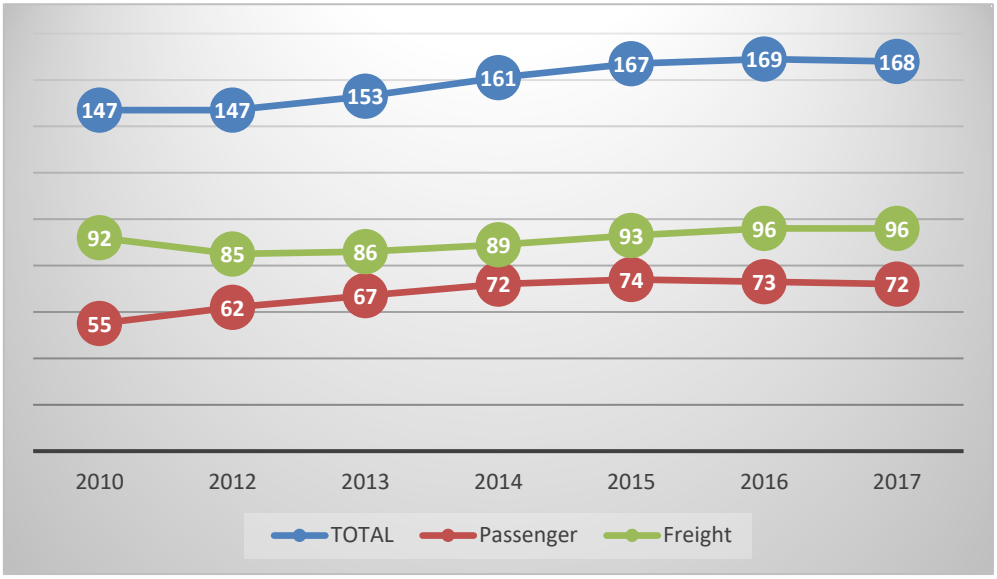
	Ave. age of vessels	Ave. size of vessels (GT)	Ave. cargo carrying capacity per vessel (DWT)	Ave. container carrying capacity per container ship (TEU)	Max. size of vessels (GT)
China	13	31,075	45,243	4,401	237,200
Indonesia	20	7,904	16,989	1,218	161,833
Japan	14	10,420	14,940	1,541	228,741
Korea	15	19,381	21,476	2,958	237,200
Malaysia	14	26,348	27,346	3,649	237,200
Philippines	19	7,631	11,844	1,673	172,521
Singapore	11	25,837	19,312	5,421	237,200
Viet Nam	15	15,025	14,229	2,229	196,670
Thailand	17	11,989	11,599	2,059	214,286

Notes: Values are average for all types of ships
GT – gross tons; DWT – dead weight tons; TEU – twenty-foot equivalent unit

Source: UNCTADstat (UNCTAD 2022), accessed on March 26, 2023

On a separate but related note, part of the goals of the government's deregulation efforts is to increase market competition in the domestic shipping industry to benefit consumers—which may be in the form of better services, more choices of providers, and/or competitive rates. Data from the Annual Survey of Philippine Business and Industry (ASPBI) in Figure 6 reveals that there was a steady increase in the number of firms involved in sea and water transport over recent years. Although it was previously observed that there are more domestic vessels catering to passengers than cargo (see Figure 5), Figure 6 contrasts that the market for passenger services is served by a relatively fewer number of firms as compared with the market for cargo services.

Figure 6. Number of firms in sea and coastal water transport



Source: ASPBI

Table 3 characterizes the firms in the domestic shipping industry. Most of these firms are small and majority-owned by Filipinos, which is probably a natural consequence of the 60–40 requirement[11] for CPC application. It can also be observed from the table that the representation of large firms is higher in passenger services than in cargo services. Conversely, foreign participation is more notable in cargo services.

Table 3. Characteristics of firms in sea and coastal water transport

	2010	2012	2013	2014	2015	2016	2017
A. Sea and coastal water transport							
Firm size							
Small (=1)	0.60	0.62	0.61	0.63	0.59	0.64	0.58
Medium (=1)	0.13	0.12	0.11	0.12	0.11	0.13	0.12
Large (=1)	0.11	0.12	0.12	0.09	0.13	0.14	0.14
Average age	17.44	19.96	19.80	20.85	19.24	20.57	23.56
Stock corporation (=1)	0.90	0.84	0.80	0.85	0.83	0.85	0.86
Capital participation of Filipinos (%)	93.24	96.90	97.18	94.75	92.70	92.67	94.89
With foreign capital participation (=1)	0.16	0.14	0.09	0.15	0.13	0.16	0.10
Total income (PHP billions)	48.47	45.96	45.63	51.49	60.12	61.27	66.56
Services provided	47.36	42.14	45.01	50.16	55.52	53.64	62.00
Other sources	1.11	3.82	0.62	1.33	4.60	7.64	4.55

[11] One of the requirements for application for a Certificate of Public Convenience is that at least 60 percent of stocks or paid-up capital of the corporation or company applying for CPC belongs entirely to Filipino citizens.

B. Passenger							
Number of firms	55	62	67	72	74	73	72
Firm size							
Small (=1)	0.55	0.71	0.59	0.64	0.58	0.71	0.50
Medium (=1)	0.15	0.06	0.07	0.11	0.11	0.10	0.13
Large (=1)	0.18	0.15	0.15	0.11	0.15	0.16	0.18
Average age	19.54	21.40	21.55	24.19	21.71	20.06	24.56
Stock corporation (=1)	0.92	0.71	0.56	0.70	0.66	0.69	0.72
Capital participation of Filipinos (%)	97.48	98.49	98.13	98.15	96.38	96.16	97.15
With foreign capital participation (=1)	0.10	0.06	0.07	0.08	0.07	0.11	0.04
Total income (PHP billions)	17.64	25.10	25.72	28.43	36.26	32.96	35.38
Services provided	17.03	21.61	25.35	27.71	32.26	26.73	32.48
Other sources	0.60	3.49	0.36	0.72	4.00	6.22	2.89
C. Freight							
Number of firms	92	85	86	89	93	96	96
Firm size							
Small (=1)	0.64	0.55	0.63	0.62	0.59	0.58	0.64
Medium (=1)	0.13	0.16	0.14	0.12	0.12	0.16	0.12
Large (=1)	0.07	0.11	0.10	0.07	0.11	0.12	0.11
Average age	16.17	18.91	18.44	18.16	17.28	20.95	22.80
Stock corporation (=1)	0.90	0.94	0.98	0.97	0.97	0.97	0.97
Capital participation of Filipinos (%)	90.70	95.72	96.42	92.03	89.73	90.02	93.19
With foreign capital participation (=1)	0.19	0.19	0.11	0.20	0.17	0.19	0.14
Total income (PHP billions)	30.84	20.86	19.91	23.06	23.87	28.32	31.18
Services provided	30.33	20.54	19.65	22.45	23.26	26.90	29.52
Other sources	0.51	0.33	0.26	0.61	0.61	1.41	1.66

Source: PSA | ASPBI

The study of Austria (2003) presented some Herfindahl-Hirschman indices (HHI) computed for the domestic shipping industry as a whole, as well as, for specific routes in 1998. HHI is a commonly-used measure to assess the concentration of firms in a market or industry to gauge the level of competitiveness. It is calculated as the sum of the squares of each firm's market share. The index ranges from $\frac{1}{n}$ to 1 (n is the number of firms in the market), wherein $\frac{1}{n}$ represents perfect competition while 1 indicates a monopoly[12]. A resulting number higher than $\frac{1}{n}$ pertains to a less competitive industry, while a number closer to $\frac{1}{n}$ means that the industry is competitive.

In this study, we attempted to provide continuity to Austria's analysis by utilizing information from the Annual Survey of Philippine Business and Industry. As shown in Tables 4 and 5, market competition in the domestic shipping industry, both for passenger and cargo services, has been better than it was in 1998. We noticed, however, that the market for cargo services

[12] Using decimals instead of percentages as whole numbers.

has evolved to be more competitive than the market for passenger services over the years, despite both markets possessing a similar structure in 1998.

Table 4. Indicators of market structure in inter-island water transport (passenger)

Indicator	1998*	2010	2012	2013	2014	2015	2016	2017
Number of firms (n)	37	55	62	67	72	74	73	72
Herfindahl-Hirschman Index (HHI)	0.210	0.214	0.329	0.180	0.176	0.188	0.177	0.166
1/n	0.027	0.018	0.016	0.015	0.014	0.014	0.014	0.014
1/HHI	4.76	4.67	3.04	5.56	5.67	5.31	5.66	6.03

Note: *Based on Austria (2003)

Source: Author's calculation; basic data from PSA | ASPBI

Table 5. Indicators of market structure in inter-island water transport (freight)

Indicator	1998*	2010	2012	2013	2014	2015	2016	2017
Number of firms (n)	66	92	85	86	89	93	96	96
Herfindahl-Hirschman Index (HHI)	0.217	0.131	0.061	0.080	0.083	0.067	0.068	0.063
1/n	0.015	0.011	0.012	0.012	0.011	0.011	0.010	0.010
1/HHI	4.61	7.66	16.34	12.52	11.98	14.89	14.79	15.84

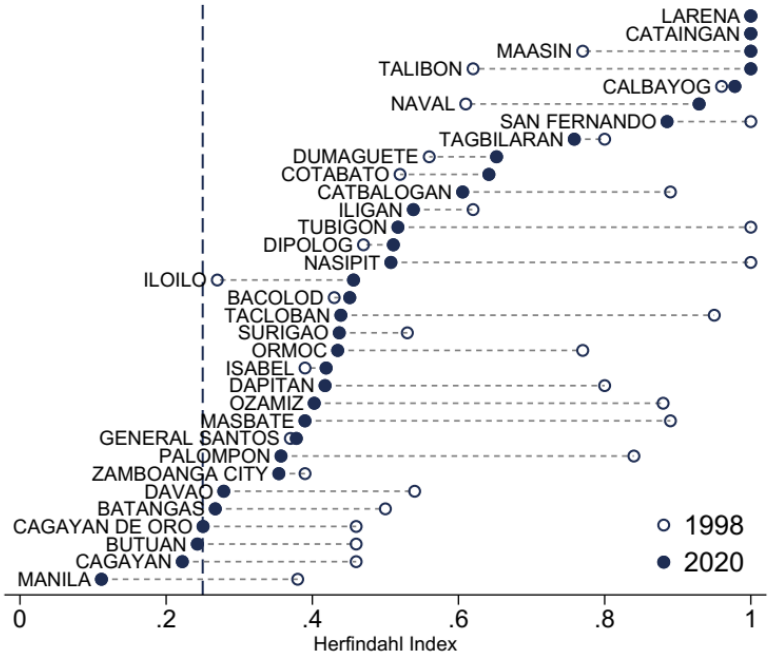
Note: *Based on Austria (2003)

Source: Author's calculation; basic data from PSA | ASPBI

Route-level data provides a more definitive view of the prevailing level of competition in the domestic shipping industry. Collecting data at this level of disaggregation, however, remains a challenge since there exists no single institution collating the information. Unable to replicate the full extent of Austria's computations, the study had to rely on the data sourced from Cebu Ports Authority (CPA) to somehow provide a glimpse of more recent route-level competition.

Figure 7 shows the comparative HHI for each port under the CPA in terms of cargo operations. While in general, there appears to be an improvement in the level of competition for cargo shipping in most ports under CPA; there are some ports such as Maasin, Talibon, Calbayog, Naval, Dumaguete and Cotabato that seem to have less competition in 2020 than in 1998.

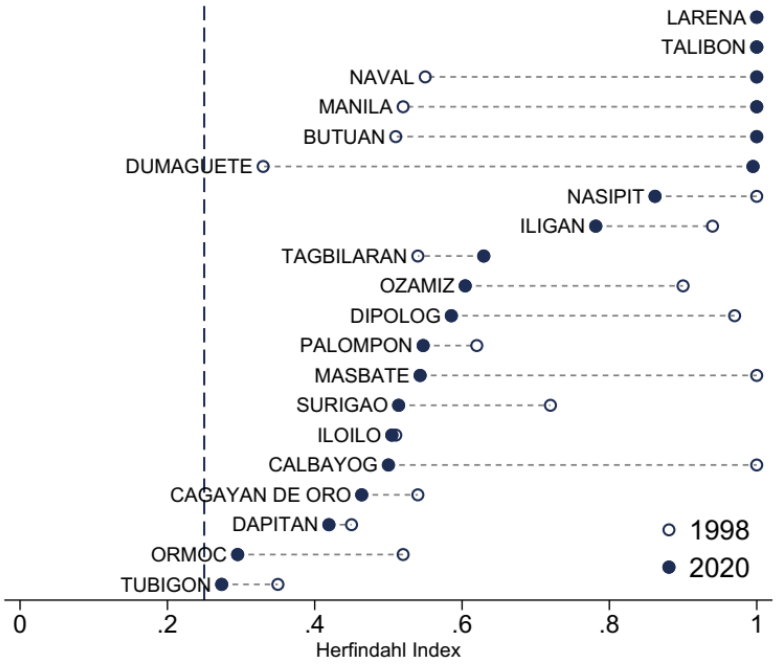
Figure 7. HHI for cargo, ports under CPA, 1998 versus 2020



Source: Author's calculation; basic data from Austria (2003) and Cebu Ports Authority

Comparably, results in Figure 8 suggest that competition in passenger shipping in most ports under the CPA has improved over time; except in the ports of Naval, Manila, Butuan, and Dumaguete which seem to have reverted back to a more concentrated market. This retrogression is unsurprising for a naturally oligopolistic domestic shipping industry that is highly reactive to market uncertainties. Although the downside is that consumers are the ones directly affected by sudden changes in market competition, as these sometimes result in higher prices or a reduction of available shipping services.

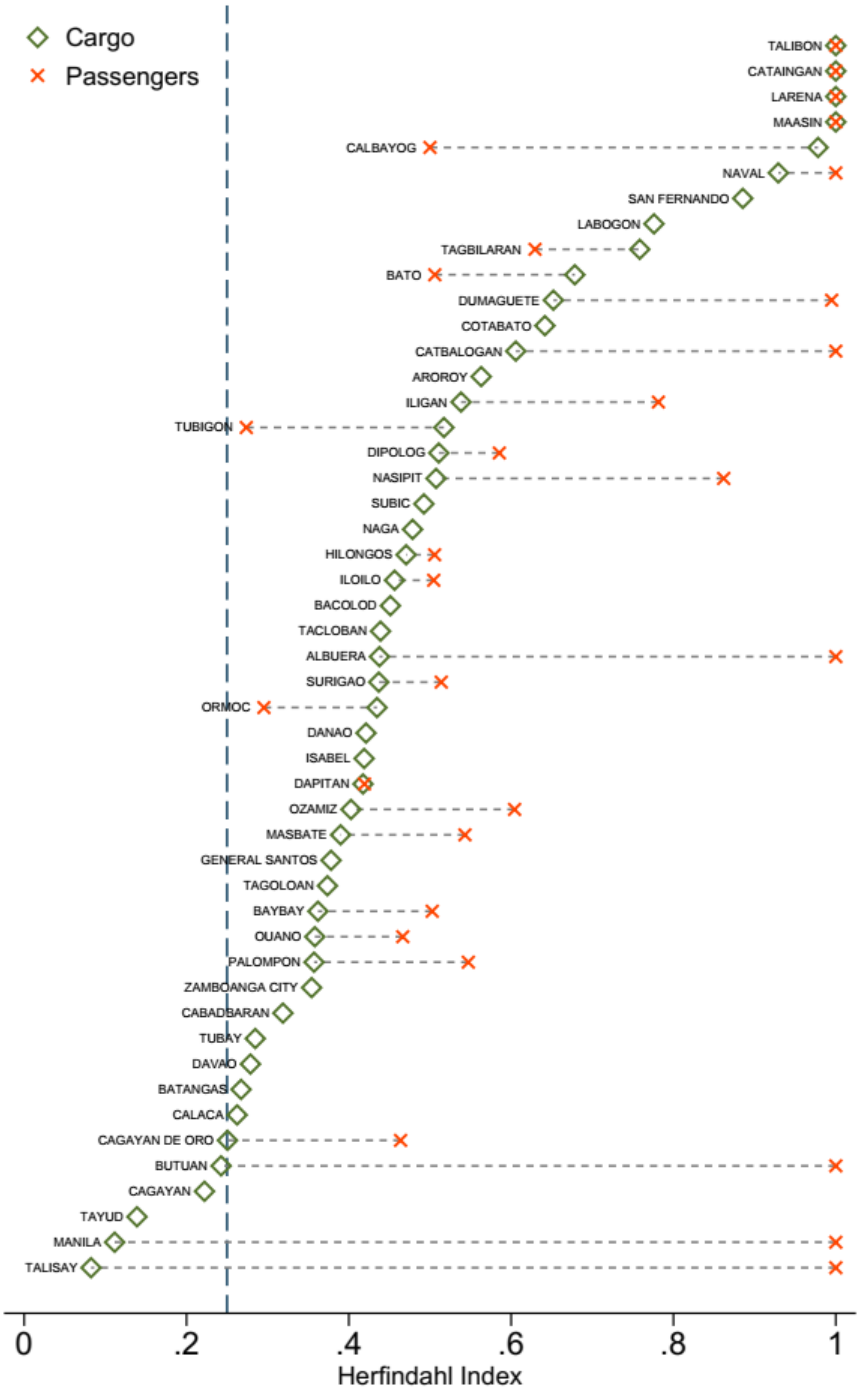
Figure 8. HHI for passengers, ports under CPA, 1998 versus 2020



Source: Author's calculation; basic data from Austria (2003) and Cebu Ports Authority

Figure 9 contains the combined indices for cargo and passenger operations for each port under the CPA, where we can generally infer that the level of competition is stronger for cargo services even at the port-level. We also noticed that there are some ports wherein cargo services are offered but passenger services are not; suggesting some possible variation in incentives and/or constraints related to the provision of passenger and cargo services.

Figure 9. Concentration index, CPA, 2020



Source: Cebu Ports Authority

Finally, in terms of maritime safety, significant changes in the number maritime accidents in the country are yet to be observed from the data. As exhibited in Table 6, annual maritime accidents even increased between 2001 and 2014, despite government efforts to reduce the numbers. We also computed that the average percentage of vessels involved in maritime accidents between the period of 2001 to 2014, is almost 6 percent of the total number of domestic vessels reported by MARINA.

Table 6. Statistics on maritime accidents, 2001 to 2014

Year	Number of Accidents Monitored/ Reported	Number of Search and Rescue Mission	Number of Casualties/ Bodies Recovered	Number of Persons Missing	Number of Lives Saved and Provided Assistance	Number of Vessels Provided Assistance	Number of domestic vessels	Vessels involved in accidents relative to domestic merchant fleet (%)
2001	168	88	59	74	1,969	163	4,424	3.7
2002	152	65	73	146	1,178	146	3,690	4.0
2003	255	63	74	232	2,903	211	3,474	6.1
2004	198	84	144	116	4,893	248	3,227	7.7
2005	122	108	25	47	2,920	118	2,787	4.2
2006	123	53	62	94	5,121	113	1,720	6.6
2007	101	72	54	71	2,337	97	2,078	4.7
2008	238	57	416	912	3,742	182	4,233	4.3
2009	375	286	49	163	13,965	361	4,840	7.5
2010	488	408	37	172	15,305	263	4,763	5.5
2011	459	166	14	162	13,661	323	7,299	4.4
2012	475	141	38	108	19,984	461	8,499	5.4
2013	569	155	180	215	17,721	569	9,574	5.9
2014	709	1,540	132	148	8,732	902	10,694	8.4

Notes: Most of the incidents are attributed to the elements of nature (bad weather disturbances). The last column contains the Author's own computation.

Source: Philippine Statistical Yearbook (various years)

More recent data in Table 7 shows that in 2019, a total of 966 accidents were reported; of which, 8.2 percent are due to sinking/capsizing of vessels. Historically, the top three causes of accidents in domestic shipping include: (1) sinking/capsizing, (2) allision/collision, and (3) aground/grounding of ships. As presented in the table, the number of maritime accidents has decreased recently, although the latest figure remains concerning.

Table 7. Causes of maritime accidents, 2015 to 2019

	2015	2016	2017	2018	2019
Major accidents					
Allision/ Collision	61	127	68	47	39
Sinking/ Capsized	137	170	91	117	79
Aground/ Grounding	84	95	40	91	44
Listing/ Drifting	2	1	1	15	10
Flooding	0	0	0	8	4
Oil Spill/ Engine Trouble	171	201	39	21	17
Fire Explosion/On Board	21	15	9	9	9
Total Major accidents	*476*	*609*	*248*	*308*	*202*
Other incidents	751	841	555	1,165	764
TOTAL	**1,227**	**1,450**	**803**	**1,473**	**966**

Note: Other incidents pertain to equipment/machine trouble, sea jacking/piracy, missing vessel, broken vessel, missing fisherman, missing aircraft, medical, evacuation, man overboard, drowning/missing, illegal fishing, apprehension, bombing/drug detection, maritime engagements, civil disturbances, natural calamity, and other unusual incidents.

Source: Philippine Statistical Yearbook 2021

Evidently, the country has not yet reached a point wherein maritime accidents are no longer an issue. However, as compared with the policies on market liberalization, notable issuances related to maritime safety are fairly recent. Hence, it may still be too early to conduct any kind of assessment. Meanwhile, a related and equally concerning issue that this study would like to point out is the lack of consistency in data, which limits researchers' capability to better understand maritime accidents. As may be deduced from the difference in data reporting in Table 6 and Table 7, analysis of historical trends is difficult to attain. We underscore the importance of reliable, complete, and up-to-date information to better guide government decisions and understand how policies are affecting the domestic shipping industry.

4. Conclusion and recommendations

The Philippine domestic shipping industry has experienced a host of policy interventions over the past two decades, intending to rectify the inefficiencies that limits its performance. While at present, there still exist a lot of issues in the industry, findings from our analysis suggest some positive developments vis-à-vis specific areas of government intervention. As a caveat, our analysis has focused merely on the existence of policies and has not touched on implementation issues.

In terms of market liberalization, the concentration indices we've computed point to a more competitive domestic shipping industry, to which we credit the government's liberalization policies that helped shape a better operating environment. In 2003, Austria already revealed a mild improvement in competition, which we observed to have further progressed over recent years. The lack of accessible route-level data prevented us from providing a more definitive

view of overall competition. Alternatively, we examined the case of ports under the Cebu Ports Authority, which suggests variation in the level of competition, consistent with Austria's previous result. Generally, we found that the domestic shipping industry has evolved to be more competitive at present, compared to how it was in 1998. One interesting finding is that the market for cargo services has outdone the market for passenger services, in terms of competition, despite having a similar starting point in 1998. We take this as a sign of possible differences in incentives or constraints in the provision of cargo and passenger services, which should be explored in future research.

Policies on encouraging investments in the domestic shipping industry appear to be relatively meager when compared with policies on market liberalization and maritime safety. While we found some indications that government measures such as the provision of special permits as well as the bare-boat chartering arrangements have helped increased the number of domestic vessels in the country, comparative data suggests more intensified efforts related to encouraging investments, as the country's shipping vessels remain older and smaller than that of other Asian countries. We underscore that these characteristics have implications not only on trade performance but also on maritime safety.

With regard to maritime safety, signs of significant progress are yet to be observed from data, despite government measures to ensure vessel worthiness and passenger safety on-board. We note, however, that some of the most notable issuances related to maritime safety are fairly recent compared to those related to market liberalization or investment; thus, it may take longer to notice some changes. Nevertheless, this area of policy reform should be monitored closely. We highlight that government focus has been exerted on raising the safety qualifications and maintenance requirements imposed on shipowners and operators.

On the whole, the persistent problem on the lack of consistently-categorized and disaggregated data for the domestic shipping industry hindered the analyses conducted for this study. We reiterate the value of complete, up-to-date and more granular information as an important input in the process of policy-making as well as for monitoring progress.

References

Austria, M. 2003. Liberalization and deregulation in the domestic shipping industry: Effects on competition and market structure. *Philippine Journal of Development* 30(55):29–69.

Balisacan, A. 1989. An analysis of Philippine interisland shipping industry. UPSE Discussion Paper No. 89-09. Quezon City, Philippines: School of Economics, University of the Philippines.

Executive Order No. 1011. 1985. Establishing the land transportation commission in the ministry of transportation and communications, and for other purposes. Manila, Philippines: Congress of the Philippines.

Executive Order No. 493. 1991. Removing red tape and reducing clearance requirements for interisland vessels. Manila, Philippines: Congress of the Philippines.

Executive Order No. 185. 1994. Opening the domestic water transport industry to new operators and investors. Manila, Philippines: Congress of the Philippines.

Executive Order No. 213. 1994. Deregulating domestic shipping rates. Manila, Philippines: Congress of the Philippines.

Golden, A. and R. Weisbrod. 2016. Trends, causal analysis, and recommendations from 14 years of ferry accidents. *Journal of Public Transportation* 19(1):17–27.

Llanto, G., E. L. Basilio, and L. Basilio. 2005. Competition policy and regulation in ports and shipping. PIDS Discussion Paper No. 2005-02. Manila, Philippines: Philippine Institute for Development Studies.

Memorandum Circular No. 46. 1989. Implementing guidelines on the rate increase and changes in level and structure. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 57. 1990. Implementing guidelines on the rate increase and changes in level and structure. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 66. 1992. Implementing guidelines on the rollback of interisland lines rates. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 67. 1992. Implementing guidelines on the automatic fuel adjustment mechanism and the +10%/-15% limit on the fork tariff system. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 68-A. 1992. Amending memorandum circular no. 68 on the guidelines on issuance of special permit for the temporary utilization of foreign registered vessels in the domestic trade. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 71. 1992. Implementing guidelines on the DOTC Department Order No. 92-587 defining the policy framework on the regulation of transport services. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 72. 1992. Guidelines on the implementation of at least a 10–minute film on the safety features of each specific passenger/passenger–cargo vessels. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 80. 1993. Policy guidelines in the regulation of domestic water transport services. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 89. 1994. Implementing guidelines for vessel safety regulations. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 104. 1995. Omnibus guidelines for the acquisition of vessels for domestic operations and fishing vessel/boat. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 106. 1995. Implementing rules and regulations on EO no.185. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 114. 1995. Preventive safety measures and other concerns. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 117. 1996. Rules and regulations to implement the provisions of executive order no. 213 (deregulating domestic shipping rates). Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 123. 1997. Wearing of lifejackets during boarding and/or prior to departure by all passenger vessels with open-deck accommodation. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 135. 1998. Rules on the implementation of voice tape on the safety features of a vessel. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 143. 1999. Rules and regulations to implement the international safety management (ism) code in domestic shipping. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 149. 1999. Amendment of MC 40/40-a re: Increased compulsory passenger insurance coverage to P100,000.00 per passenger. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 150. 1999. Introduction of a second class, non-airconditioned passenger accommodation and prescribing minimum service standards. Manila, Philippines: Maritime Industry Authority

Memorandum Circular No. 152. 1999. Amendments to Chapter I, regulations I/6 of the Philippine Merchant Marine Rules and Regulations (PMMRR) 1997 on inspection, drydocking and statutory certificates. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 153. 1999. Revised rules and regulations implementing deregulation of domestic shipping rates. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 159. 2000. Adoption of a national safety management code and providing rules and regulations for its implementation in the domestic shipping. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 161. 2000. Revised rules and regulations to implement EO 185 on opening the domestic water transport industry to new operators and investors. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 175. 2002. Mandatory display of the maximum authorized passenger capacity for passenger-carrying motor bancas with open deck accommodation and similar watercrafts. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 176. 2002. Wearing or holding of lifejackets by passengers of motorized bancas and similar water transport carrying passengers. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 179. 2002. Issuance of the minimum safe manning certificate for Philippine-registered ships/ fishing vessels operating in Philippine waters or temporarily utilized in overseas trade/ international waters. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 190. 2003. Rules on the progressive/gradual phase out of wooden-hulled ships in the domestic trade. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 191. 2003. Rules in the conduct of drug and alcohol testing of all seafarers and other personnel serving onboard ships engaged in the domestic trade. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 08. 2008. Rules to implement safety measures for passenger ships with open deckhouse. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 13. 2009. Additional penalty for passenger-carrying ships involved in a maritime accident/incident for the carriage of passengers in excess of the authorized passenger capacity. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 23. 2009. Rules in the grant of missionary route operator status for roro and similar type of ships. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 01. 2011. Rules for construction 0f wooden hull ships and for wooden hull boats with outriggers. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 04. 2011. Revised rules on the temporary utilization of foreign-registered ships within the national territory. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 06. 2012. Revised minimum safe manning for ships operating in Philippine domestic waters. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 03. 2014. Rules to govern the installation and implementation of ship radar reflector (SRR) onboard ships engaged in domestic operations. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 07. 2015. Rules and regulations for the construction, conversion, alteration, modification, rebuilding of Philippine-registered domestic ships. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 08. 2015. Rules and regulations on subdivision and damage stability requirements for Philippine-registered domestic ships. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 11. 2015. Revised rules and regulations to implement a safety management system for domestic shipping. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 01. 2016. Revised rules on the mandatory passenger insurance coverage; emergency assistance to survivors of maritime accidents/incidents; and other relevant concerns. Manila, Philippines: Maritime Industry Authority.

Memorandum Circular No. 02. 2017. Rules on the temporary utilization of foreign-registered highly specialized ships within Philippine territorial water. Manila, Philippines: Maritime Industry Authority.

Republic Act 9295. 2004. An act promoting the development of Philippine domestic shipping, shipbuilding, ship repair and ship breaking, ordaining reforms in government policies towards shipping in the Philippines, and for other purposes. Manila, Philippines: Congress of the Philippines.

World Bank. 2014. Enhancing competition conditions and competitiveness of Philippine domestic shipping. Washington, DC: The World Bank Group.