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Liberalization and Deregulation in the Domestic Shipping Industry: Effects on Competition and Market Structure*

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Introduction

Considering the archipelagic setting of the country, the domestic shipping transport industry is one of the most important structural supports of the economy. The industry provides the primary means of interisland transport. That is, the bulk of domestic trade is transported by shipping; interisland travel, especially in the Visayas and Mindanao, is also largely dependent on shipping. Given this vital role, an efficient shipping industry, where passengers and cargoes get to their destinations on time and in good and safe condition at the least possible cost, is crucial to the economic growth of the economy.

The country's domestic shipping industry, however, has been regarded to be inefficient. This is rather unfortunate, as the industry has a large number of shipping operators who expect competition to be a powerful force for eliminating inefficiency. Past studies suggest the underlying explanation has much to do with the regulations and policies of the government affecting the industry.

The industry has been highly regulated until policy reforms were instituted beginning in the 1990s in response to the continuing inefficiency. The reforms came through the deregulation of the passage and freight rates and the liberalization of route entry. This study examines the effects of these policy reforms on competition and market structure.

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The scope of the paper is limited to the interisland liner shipping industry, because this is the sector of the industry where regulation is highly concentrated and whose viability is highly sensitive to government policy.[1] In addition, the study covers only shipping transport which refers to the actual transportation service performed once the commodity or passenger is on board a ship until the ship reaches its port of destination. Issues on other shipping services, namely, auxiliary services (i.e., activities related to cargo manipulation in ports and ships like cargo handling, storage and warehousing, freight forwarding, etc.) and port services (i.e., activities related to ship management in ports like pilotage, towing and tug assistance, navigation aids, etc.) are therefore not included. These activities are confronted by issues of their own.

The paper is organized as follows. The next section discusses the contestability of markets in the shipping industry, including the arguments for and against regulating the industry. The succeeding section examines the policy reforms made through liberalization and deregulation. The effects of the reforms on market structure and competition, including the impact of competition on efficiency, are then analyzed. This is followed by a discussion on the role of the Maritime Industry Authority (MARINA) in a deregulated and liberalized environment. Areas for competition policy and further reforms are then identified. The summary and conclusions are presented in the last section.

Contestability of markets in the shipping industry

The literature on contestability of markets points to the importance of the threat of competition, as distinct from actual competition, in enforcing good behavior and conduct among firms in the industry (Hanlon 1996). This kind of market is characterized by the following: (a) there are no barriers to entry (i.e., no extra cost borne by new entrants that are not borne by the incumbents; (b) there are no sunk costs (i.e., costs that cannot be recouped when a firm withdraws from the industry); (c) the time it takes for the incumbents to change their price in response to the entry is longer than the length of time it takes for a new entrant to make profits. According to this theory, firms in oligopolistic industries will still price at the same level as they would in a perfectly competitive market so long as the threat of competition exists. In

[1]"Liner shipping" refers to the operation of domestic water transportation that offers its services to the public without discrimination, has regular ports of call and fixed sailing schedules and frequency. The industry has two other sectors namely, (a) tramp shipping, where freight vessels do not ply a regular route but are hierd on a contractual basis by shippers under mutually agreed terms; and (b) industrial carriage, which is operated by companies to cater to their own needs. Of the three sectors, only liner shipping is regulated by the government.

other words, under this market, the incumbents can protect themselves from new competition only by behaving well.

A contestable market offers to consumers and the society similar benefits from a perfectly competitive market (Baumol and Lee 1991). Because of the threat of competition, firms cannot charge higher-than-competitive prices or earn excessive profits; any attempt to do so would invite new entrants to undercut the incumbents' prices to a level that could still give them attractive returns. Waste and inefficiency beyond what is allowed by the current state of technology and level of knowledge are also avoided, as these would be reflected in higher costs and prices, the presence of which would invite the entry of efficient firms. Likewise, predatory pricing and cross-subsidy pricing are prevented. Predation becomes unattractive, since it can only be done if there is a prospect for making future profits large enough to recoup losses made when prices or profits are kept low to drive competitors or new entrants away; but then excessive profits would invite entry. Cross-subsidy occurs when a firm charges a price below cost to particular groups of customers and the loss is made up for by charging excessive prices to other customers. This is not feasible under a contestable market, as the excessive price would invite new entrants who can sell at a lower price level. In effect, the new entrants are capturing from the incumbents the earnings that were previously used for cross-subsidy.

Arguments for and against regulating the shipping industry

The shipping industry is a highly contestable market in the absence of government regulations. The common argument for the need to regulate liner shipping is based on the supposed danger of chronic instability due to inherent tendencies to ruinous competition and monopoly (Renardet Sauti Consulting Engineers 1986). That is, the industry is highly vulnerable to price and capacity fluctuations, which lead to ruinous competition and eventually to monopoly, after the weak firms are driven out.

Price instability

Vulnerability to price and capacity fluctuations, if there are no limits to competition, is argued to be associated with the cost structure of the industry. Once a vessel is at berth, the only cost associated with carrying an extra ton of cargo is the cost of loading and discharging it; and such marginal cost is very low, an average of 25 to 30 percent of the freight rate. At such rate, an operator cannot survive. Hence, an operator will find it profitable to take an extra cargo at a rate higher than the handling cost. However, if there is free competition, the rate would be forced to go down to the level of the handling cost whenever there is any surplus in capacity. The industry will then become unprofitable for all operators.

However, the above argument does not seem plausible, as shipping operators do not cut their rates to the level of marginal costs once the ship is at berth. Instead, what influences the behavior of operators is not the marginal cost of an extra ton of cargo, but the cost of an extra voyage or set of voyages and their relation to revenues at pre-determined rates.

Nevertheless, price-cutting is practiced only to the extent that there is overcapacity or overtonnaging in the industry. This practice can lead to rate instability.

Monopoly

Another argument for government regulation is the danger of monopoly. A natural monopoly occurs when economies of scale allow a large company to charge lower prices because its unit costs are lower than those of a small company. This will eventually drive small firms from the market. In shipping, the lower unit costs may arise from larger ships or from a larger number of ships.

It is argued, however, that there are no significant economies of scale in the shipping industry (Renardet Sauti Consulting Engineers 1986), or that they are not a significant barrier to entry in the industry (Dick 1987). While a larger vessel will generally give lower costs per ton than a small ship, the cost advantage of larger vessels is offset by two factors. One, cargo-handling rates increase less than proportionately with ship size, so that the larger ship tends to spend a larger proportion of its time in port. Two, smaller ships are able to provide more frequent service because of their faster turnaround. Hence, small ships can operate alongside larger ships.

As far as fleet size is concerned, a large fleet will not necessarily have lower costs per ton than a small fleet. More than 80 percent of a shipping company's operating costs are ship operating costs, the rest being terminal and administrative ones. Thus, if a company increases its fleet by 20 percent, its operating cost is expected to increase by the same amount (Renardet Sauti Consulting Engineers 1986).

Furthermore, economies of size appear to be insignificant beyond about three ships, while diseconomies seem to occur beyond about 10 ships (Dick 1987). This is attributed to managerial diseconomies of scale. Shipping companies are said to be difficult to manage because the locations of the head office, branch office, and terminals are so dispersed. Profitability is highly dependent on capacity utilization, which in turn depends on port turnaround. This would then require some kind of loyalty to the shipping company of officers and crew to cooperate in speeding up turnaround. As a general rule, however, officers and crew prefer a longer to a shorter stay in port. Hence, to increase turnaround and productivity, some kind of incentive and a good wage structure is required. The practice of family-owned shipping businesses is to appoint family members to man the day-to-day operations of

the business across various ports. However, as the number of ships, routes, and ports increases, the problem of control and management seems to increase disproportionately.

Competition in shipping

Rate discounting, particularly on freight rates, is a common practice in the industry. Even when there are government regulations on rate setting, the official rates become just a benchmark or a base from which to discount. Actual freight rates are usually the product of bargaining between shippers and shipping operators (Dick 1987). Discount comes in various forms like under-recording the weight or volume of the cargo, or declaring the cargo as a low-value item. Since such practices do not involve a reduction in freight rate, as reflected in the bill of lading, shipping companies can make it appear that they are following the official rates.

Discounting drives up price competition in the industry. To lessen the pressure for rate discounts, shipping companies with established financial position offer longer-term payments. On the other hand, forwarders, traders, and large companies that distribute their own products can make bargains for large discounts by offering a contract for their cargoes for a fixed period. Guaranteed by the security of a contract and a large volume of cargoes, a shipping company can thus settle for a low margin for its shipping rates.

The disadvantage of competing through rate discounting, however, is that any discount can readily be matched by competitors. Thus, in the face of intense rate competition, the best strategy for a shipping company is to become the market leader in terms of quality of service. In practice, freight rates are not the primary but the balancing item in the services negotiated with shippers, as shippers and traders are more concerned with the safety of their cargoes. That is, the cost of a late or damaged cargo could be much more than the savings from a small discount in freight rate.

Thus, competition in shipping is primarily in terms of quality of service. A good reputation for reliable service can insulate shipping companies from intense competition in freight rates and allows them to charge a premium rate and earn a more-than-normal profit. But charging a premium rate does not provide a long-term guarantee against competition, as it encourages other companies to improve the quality of their service and hence their competitiveness. However, in times of excess capacity when rate-cutting is prevalent, companies with good reputation are able to keep their share of the market while companies offering not-so-reliable service destroy each other in a fight for the crumbs. In practice, rate-cutting is prevalent only among firms at the lower end of the market offering the poorest service and struggling to survive.

Liberalization and deregulation[2]

Regulation has a long history in the country's shipping industry. It covers route entry and rate determination. Regulation for liner rates began in 1928 to protect the public from indiscriminate charging by shipping companies and to protect the investment of liner operators by preventing ruinous competition. On the other hand, regulation for route entry was introduced in 1972, with the objective to bring capacity and demand into balance. At that time, the major routes were overtonnaged while many of the other routes were either inadequately served or not at all (Nathan Associates 1991).

The government fixed the rates, or what are commonly called tariffs. Prior to the policy reforms, the basic structure of tariffs remained largely unchanged (Renardet Sauti Consulting Engineers 1986). Likewise, the revenue deficiency method used in the upward adjustment of rates guaranteed operators of earning profits, regardless of their performance.[3] Thus, even inefficient firms, which would normally be driven out of the industry if market forces were allowed to operate, earned profits. Worse, the method made the level of rates too high over the years. Although the government fixed the rates, enforcement was weak. With rates too high and enforcement weak, discounting became the rule (Nathan Associates 1991).

On the other hand, there was a deliberate policy, throughout the pre-reform period, of limiting competition by restricting entry. This was implemented through the "grandfather rules" in the granting of license to operate, namely, prior operator, prior applicant, and protection of investment. In general, these rules imply that if the demand warrants additional fleet in a route, priority is given to the existing operator to put in the additional vessel to meet the demand; but if there are several existing operators in the route, priority is given to the first applicant. If there is no existing operator in a route, entry is allowed and the new entrant is protected in his investment by not allowing another operator until he has recovered his investment. Under the three rules, however, the past service records of the operator/s or the new applicant/s were not taken into consideration.

The past industry regulations had adverse impact on the industry and the economy. These are well documented in such studies as the Interisland Shipping Regulation Study prepared by the Renardet Sauti Consulting

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[2]Austria (2002) includes a more detailed discussion of the regulatory framework and policies during the pre-reform period and their consequent impacts on the growth of the industry and the economy.

[3]Under the revenue deficiency method, the revenue required to provide a rate of return (ROI) consistent with the Public Services Act of 1936 (which is 12 percent) is compared to the actual revenue generated, and the difference indicated the deficiency in rates. The method does not consider average load factors and degree of efficiency of operations such that even if load factors are low and vessel operation is inefficient, rate increases were approved so long revenue was insufficient to obtain the prescribed ROI.

Engineers in 1986; findings of the Presidential Task Force on Interisland Shipping Industry in 1989; the Philippine Transport Sector Review in 1990; and the studies prepared by Nathan Associates, Inc. on the Interisland Liner Shipping Rate Rationalization Study in 1991 and the Liner Shipping Route Study in 1994. In general, the studies show that the tariff structure suffered from major flaws. First, the rate differentials between passenger or commodity class did not reflect differences in the cost of providing the services for each group; thus, resulting in the discrimination of some commodities and particular routes in the provision of shipping services. Second, the commodity classification was also problematic as rates for some commodities were set too low, thus failing to ensure the availability of sufficient service at all times; while rates for other commodities were set too high to permit them to bear the charges. Third, application of a uniform-rate formula for all routes was inappropriate, as it did not consider both cargo inflow imbalances and cargo mixes.[4] Finally, the passage rates were not permitted to keep pace with the increasing cost of providing passenger services, making profitability in passenger service difficult to achieve and resulted in the tendency to overload and provide poor-quality service.

The adverse impacts of the flaws in the tariff structure and rate setting have fallen disproportionately on the producers and traders of agricultural commodities. The very low rates for these commodities have limited the appropriate shipping services for them. In turn, the unavailability of sufficient services inhibited the growth of interisland trade and agricultural diversification; and resulted in high storage costs, commodity value losses resulting from deterioration, and high charges from the alternative and limited services of trampers and air transport.

Given the adverse impacts of the past regulatory system on the economy, policy reforms were introduced through the deregulation of rates and the liberalization of route entry. The change in policy was meant to introduce and / or enhance the level of competition in terms of the rates charged and the quality of service rendered; and to attract new shipping investments by leveling the playing field for existing and new operators.

Deregulation of Liner Rates

A summary of the reforms for liner rates is shown in Table 1. Changes in policies and regulations were first initiated in 1989 under Memorandum Circular (MC) No. Early reforms included the (a) abolition of the charging

[4]The unit cost per ton of cargo increases as capacity utilization falls. High-capacity utulization rate cannot be achieved if there are large imbalances in the inbound and outbound traffic. Hence, rates for routes with a good balance of the traffic in the two directions will not be appropriate for routes with large imbalances.

of ad valorem[5] rates, although a 3/10 percent surcharge of the declared value of the commodity was imposed, except for Basic commodities; (b) reclassification of basic commodities to Class C (basic);[6] and (c) deregulation of the first- and second-class passage rates.[7] For the latter, a minimum of 50 percent of vessel capacity should be allocated to third-class accommodation. The deregulation allowed operators to determine the rates they should charge for their services.

Further reforms were made in 1990 under MC No. 57. The 3/10 percent surcharge was abolished; hence, all commodities were charged the corresponding class rates. Freight rates for refrigerated cargoes, transit cargoes, and livestock were also deregulated. A most welcome reform was the introduction of the fork tariff system for the determination of freight and passage rates.[8] Under the system, rates are allowed to fluctuate between upper and lower limits from a given reference or indicative rate, thereby providing some flexibility in the determination of rates. For cargoes, the system provides a mechanism for the shippers and shipping operators to negotiate the rates within the band set by the government. The first fork tariff system had a lower and upper limit of –5 percent and +5 percent of the reference rate, respectively. This meant that a domestic shipping operator could increase his freight rate of a given commodity or shipment up to a maximum of 5 percent and may deduct a maximum of 5 percent on the base rate.

In 1991 (MC No. 59), the reference rate for the fork tariff system was increased by 12 percent for the passage rate and 8 percent for the freight rate. In 1992 (MC No. 66), a 6 percent rollback on freight rates was adopted. In addition, the lower and upper limit of the fork tariff system was increased from +/-5 percent to +10/-15 percent. A mechanism for automatic fuel adjustment whenever prices of fuel increased or decreased by at least 10 percent was also instituted.[9]

The early reforms, however, were unable to correct the problems identified earlier. First, the flexibility provided by the fork tariff system was very limited as the rates could not vary to the extent that operating costs

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[5]As an alternative to class rates, operators had the option to charge an ad valorem rate on any good valued at over P2,000 per ton. The rate was 0.5 percent in 1928, at which time, it excluded almost all goods in the interisland trade. By the 1980s, however, the threshold included most commodities.

[6]Basic commodities include rice, palay, corn, corngrits, fruits, vegetables, and livestock.

[7]First-class passenger rate was first deregulated in 1983.

[8]Only members of the Conference of Interisland Shipowners and Operators and all other operators who have filed applications for rate increase by paying the corresponding fee and issued the corresponding order are authorized to use the fork tariff system.

[9]Under the mechanism, however, shipping operators cannot unilaterally adjust their rates. Instead, MARINA will automatically adjust the rates with the issuance of the appropriate order increasing or decreasing the rates within five working days after the increase/ decrease of fuel price.

varied with respect to routes, ship technology (especially with the introduction of container service and roll-on roll-off, or RORO, service), quality of packaging, and changes in cargo handling methods. Second, the compulsory requirement to allocate 50 percent of passenger capacity to third-class passengers made pure passenger vessel operation less viable. Third, the reclassification of basic commodities to Class C (Basic) failed to correct the insufficiency of appropriate liner service for these commodities. Finally, the deregulation of the second- and first-class passenger service did not cause movement of passengers from third to second class (Nathan and Associates 1991).

Hence, further deregulation was made toward the end of 1992 (MC No. 71), this time involving the freight rates for Class A and Class B cargoes. The operators were, however, required to file their rates for Class A and Class B and any changes thereafter with the MARINA. In 1993 (MC No. 80), Class C (basic) was abolished and the commodities classified therein were reclassified as Class C. Fruits and vegetables in ventilated containers were also deregulated. For passage rates, vessels accredited by the Department of Tourism (DOT) as serving tourist areas were exempted from the requirement of allocating 50 percent of their total passenger capacity to third-class passengers. Accordingly, their rates were deregulated. However, if the vessel only had first-class and second-class passenger accommodation or where the third-class passenger accommodation was less than 50 percent of the passenger capacity, the second-class passage rate was regulated.

Further deregulation of freight rates was made in 1994 through Executive Order No. 213, with implementing guidelines under MC No. 117 issued in 1996. All freight rates were deregulated, except for noncontainerized basic commodities. However, for monopolized and cartelized routes, passage and freight rates continue to be regulated. The fork tariff system is still applied to all regulated rates, the upward adjustment of which continues to follow the revenue deficiency method.

The implementation of deregulated freight rates, however, is another matter, as operators were not allowed to determine on their own the rates they will charge for their services. Instead, the Domestic Shipping Consultative Councils (DOSCONs), composed of shippers/consumers, operators and representatives from the government, was instituted to provide a forum for consultations and negotiations for the implementation of the deregulated rates or any upward adjustments of the rates. Hence, the deregulation, as provided for in EO 214, only modified the process of fixing cargo rates—a task previously exercised by the government through a quasijudicial process.

The DOSCON, however, was abolished in late 1999 when the implementing guidelines of EO 213 were revised under MC No. 153. Under the revised guidelines, all an operator needs to do is to file a notice of adoption

Table 1. Government regulations on domestic shipping rates.

EO / MC & year	Title of EO / MC	Passage Rates			Freight / Cargo Rates				Remarks
		First Class	Second Class	Third Class	Class A	Class B	Class C	Basic/Class C (Basic)	
MC 46, May 1989	Implementing guidelines on the rate increase and changes in level and structure	Deregulated (since 1983)	Deregulated	Regulated	Regulated	Regulated	Regulated	Regulated	(a) Charging of ad valorem rates abolished; (b) Class Basic reclassified as Class C (Basic); (c) 50 percent of passenger capacity allocated to third-class accommodation.
MC 57, May 1990	Implementing guidelines on the rate increase and changes in level and structure	Deregulated	Deregulated	Regulated	Regulated	Regulated	Regulated	Regulated	(a) Rates for refrigerated, transit and livestock deregulated; (b) Fork tariff system used for determining regulated rates.
MC 59, April 1991	Implementing guidelines on rate increase	Deregulated	Deregulated	Regulated	Regulated	Regulated	Regulated	Regulated	(a) Increase in the fork rate by 12 percent and 8 percent for passage and freight rates, respectively.
MC 66, May 1992	Implementing guidelines on the rollback of inter-island lines rates	Deregulated	Deregulated	Regulated	Regulated	Regulated	Regulated	Regulated	(a) 6 percent rollback on freight rates.
MC 67, May 1992	Implementing guidelines on the automatic fuel adjustment mechanism and the +10%/-15% limit on the fork tariff system	Deregulated	Deregulated	Regulated	Regulated	Regulated	Regulated	Regulated	(a) Automatic fuel adjustment whenever fuel prices increase/decrease by at least 10 percent; (b) increase in the upper/lower limit of the fork tariff from +/-5 percent to +10 percent /-15 percent effective Jan. 1993.
MC 71, Oct. 1992	Implementing guidelines on the DOTC Dept Order No. 92-587 defining the policy framework on the regulation of transport services	Deregulated	Deregulated	Regulated	Deregulated	Deregulated	Regulated	Regulated	(a) Class C (Basic) to be reclassified into Class C in 1993.

Table 1. Continued

EO / MC & year	Title of EO / MC	Passage Rates			Freight / Cargo Rates				Remarks
		First Class	Second Class	Third Class	Class A	Class B	Class C	Basic/Class C (Basic)	
MC 80, Nov. 1993	Policy guidelines in the regulation of domestic transport services	Deregulated	Deregulated	Regulated	Deregu-lated	Deregu-lated	Regulated	Abolished reclassified as Class C	(a) DOT-accredited vessels exempted from allocating 50 percent of their passenger capacity to third-class passenger; (b) freight rates of fruits and vegetables shipped in ventilated containers deregulated.
EO 213, Nov 1994; MC 117, Oct. 1996	Deregulating domestic shipping rates (EO 213); Rules and regulations to implement the provisions of EO 213 (MC 117)	Deregulated	Deregulated	Regulated	Deregu lated	Deregu-lated	Deregu-lated, ex-cept non-containe-rized basic commo-dities		(a) Implementation of deregulated rates follow DOSCON process; (b) passage and freight rates for monopolized/ cartelized routes regulated; (c) fork tariff system still applies for regulated rates
MC 153, Dec. 1999	Revised rules and regulations implementing deregulation of shipping rates	Deregulated	Deregulated	Regulated	Deregu-lated	Deregu-lated	Deregu-lated, ex-cept non-containe-rized basic commo-dities		(a) DOSCON process abolished.

Note: The remarks only cover the salient features not included in the preceding circulars, unless stated as abolished.

of deregulated rates with the MARINA, and when qualified, MARINA will issue an order within 30 days upon receipt of the notice. The deregulated freight and passage rates should remain in force for at least three months before any upward adjustment is allowed.

Upward adjustments of deregulated rates can take effect 15 days after the publication of the notice for increase filed with the MARINA in a daily newspaper of national circulation and in one daily newspaper of regional circulation in the port/s affected by the rate adjustment.

For regulated rates, upward adjustment is still based on the revenue deficiency method. Under the new policy environment, the method is no longer appropriate, as the financial statements of shipping companies include their deregulated operations.

In general, the deregulation of the liner shipping rates has been a slow process. It took the government more than 10 years to gradually deregulate the liner rates. Yet, it was only in the year 2000 that government intervention in rate setting was lessened. With deregulation, the shipping companies can now consider the traffic imbalances and cargo mixes in setting the rates for the routes they serve. Areas remain regulated and can be strategic areas for modernizing the industry. For example, shipping companies can upgrade their vessels and facilities and be accredited with DOT to qualify them in the exemption from allocating 50 percent of their passenger capacity to third class and enjoy deregulated rates. In addition, the exception of noncontainerized basic commodities from deregulation should encourage the use of other shipping technology in transporting these commodities, like roll-on roll-off vessels.

Much is still desired, however. The rate for third-class passenger service, for example, has yet to be deregulated.

Route liberalization

Route liberalization was first introduced in 1992. Two general principles are observed for the issuance of a license. First, the interest of the public is paramount. That is, the interest of the public shall prevail over the "grandfather rules." Second, the presumption of public need for a service is deemed in favor of the applicant for a license while the burden of proving that the proposed service is not needed shall be with oppositor/s who is/are the current authorized operator/s.

Given these principles, routes were opened to entry to at least two operators (MC No. 71 and MC No. 80 in 1992). Monopolized routes were opened for entry to additional operators. Operators in developmental routes, on the other hand, were accorded protection for their investment for a maximum period of five years, after which, the route is open to entry to at least one additional operator. This was in stark contrast to the past regulation, where an operator in a developmental route is accorded protection of his

investment for an indefinite period until he has recovered his investment. This change in rule would definitely encourage the operator to increase his efficiency to recover his investments before competition from additional operators sets in. Entry of newly acquired vessels in routes already served by existing franchised operators, including developmental routes, is also deregulated provided that it will introduce innovative, technologically and cost-effective shipping services, among others.

Operators are allowed to withdraw or suspend their operations after notifying MARINA 15 days prior to the planned withdrawal or suspension and after duly informing the public. An operator, however, forfeits his license if he abandons, withdraws, or suspends his operation for four months without notifying MARINA. Increase in capacity is also allowed through replacement with a bigger vessel, introduction of additional vessels, and/or increase in frequency of existing vessels. An operator can also change his routing pattern through the omission of ports, addition of one or more ports, or the introduction of an entirely new route provided, however, that the change is not in conflict with the schedule and frequency of existing operators and that no route is left unserved by the rerouting.

The initial liberalization efforts were further strengthened with the issuance of Executive Order 185 in 1994 and its corresponding implementing rules and regulations under MC 106 in 1995. In particular, all routes that have been serviced by any operator for an aggregate period of at least five years shall be open for entry to additional operators. Likewise, any operator who pioneers in the provision of a certain technological level of shipping service in a developmental route is allowed to charge market-accepted freight and passage rates different from the fork rates. The adoption of such rates after five years, however, is dependent on the evaluation of MARINA. In addition, when a vessel is replaced to increase capacity, its license is revoked to ensure that it will not be used anywhere else and, hence, will not result in increased tonnage in the routes. Similarly, when capacity is increased through the introduction of additional vessel that is chartered from a franchised operator, the original franchise of the vessel is revoked. This policy was again a big contrast to the past regulation where the license of a vessel replaced was not revoked.

The implementing guidelines of EO 185 were revised under MC No. 161 in 2000, providing further dimension to the liberalization efforts. In particular, the conditions or criteria under which possible protection could be accorded to operators were specified. These include conditions for the existence of ruinous competition and protection of investment of pioneering operators. Only under the conditions specified should entry of additional operators to a route be restricted. The conditions set therefore added greater transparency to the rules of the game.

Market Structure and Competition

The Herfindahl-Hirschman Index (HHI), measured as the sum of the squares of the market shares, is used as an indicator of market structure. It is compared with the ratio 1/n, where n is the number of operators in the industry. The higher the index relative to 1/n, the less competitive the industry is. The inverse of the index gives the number of equal-size competitors that would provide a degree of competition equivalent to that actually observed in the market share data. Hence, it is used as a measure of the number of effective competitors.

The aggregate indicator of market structure for the industry is based on the primary and secondary routes only; tertiary routes were excluded in the computation. Since the tertiary routes involve short travels and hence more frequent trips, the total passengers and cargoes plying these routes would be larger in number compared to the primary and secondary routes. Moreover, since HHI is based on market shares, including them in the computation would distort the picture.

However, the aggregate indicator of market structure may give very little insight on the extent of market power in the different routes because the interisland fleet is distributed across so many different routes. It is possible that a small operator may capture a large market share in a particular route by concentrating its fleet in that route while a large operator may not capture a significant market share if it spreads its fleet across several routes. Thus, it is important to also examine the market structure by routes. The routes are classified based on the value of 1/HHI as shown in Table 2.

The study used secondary data and interviews of shipping operators to analyze market structure and competition in the shipping industry. Secondary data on passenger and cargo traffic by route and shipping company were gathered using the 1998 annual traffic reports of shipping companies submitted to the MARINA. This is the latest set of data that are available and complete. Much as the study would like to include early years to represent the pre-reform period so that an analysis on whether or not the policy reforms had made an impact on the market structure could be made, the annual reports of shipping companies were not complete.[10] Hence, to get a sense of the impact of the reforms in the absence of data, interviews were made with four shipping lines based in Metro Manila, six shipping lines based in Cebu, three shipping associations, and the Distributors Management Association of the Philippines (DMAP).

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[10]The 1983 data were initially processed but the annual reports of some of the shipping companies are missing. MARINA has data on annual total passenger and cargo traffic but not by route and shipping company, which are needed in analyzing market structure and competition.

Table 2. Classification of routes

Classification	Indicator
(1) Routes with only one (1) operator monopoly	HHI = 1
(2) Routes with at least two (2) operators	
a. Only one (1) effective competitor	$1 < \frac{1}{HHI} < 1.4$
b. Substantial competition	$\frac{1}{HHI} \leq$ # of operators
c. Mild competition	$1.4 < \frac{1}{HHI} <$ # of operators

Data on passenger traffic were used in measuring the market structure for the passenger service. For cargo service, since different units of measurement were used for cargo traffic, aggregation was impossible.[11] Thus, data on cargo revenue were used. Also, since the latest secondary data available are those of 1998, the analysis of the study on market structure does not reflect the possible effects of MC 153 and MC 161, which provided further dimension to the government's efforts on rate liberalization and route deregulation, respectively.

Market Structure

Passenger service

The HHI shows that the domestic shipping industry is highly concentrated (Table 3). The five largest operators accounted for as much as 90 percent of the total passengers. The inverse of HHI shows that out of the 37 operators plying the primary and secondary routes, less than five are effectively competing.

The five largest players in the passenger service, in decreasing order, are Negros Navigation Company, WG&A, Sulpicio Lines, Philippine Fast Ferry Corporation, and Cebu Ferries Corporation. Three of these operators are new competitors, having been established only during the reform period. WG&A is a product of the merger of three shipping giants (William Lines

[11]Units of measurements include kilogram, metric tons, and quantity.

Table 3. Indicators fo market structure, passenger service, 1998

Indicators	
Share of top five firms	90.26
Share of top three firms	72.94
Herfindahl index (HHI)	0.210
Number of operators (n)	37.00
1/n	0.027
1/HHI	4.76

Inc., Carlos A. Gothong Lines, Inc. and Aboitiz Shipping Corp.) in 1996. Philippine Fast Ferry (PFFC) is also a product of the merger in 1998 of the Cebu-based Universal Aboitiz, Inc. and Bacolod-based Sea Angels Ferry Corporation, a subsidiary of Negros Navigation Company. Cebu Ferries Corporation (CFC) was established in 1996 as a subsidiary of WG&A. Both PFFC and CFC have been pivotal to the birth of the fast ferry industry in the country. The other two players (Negros Navigation and Sulpicio Lines) are old players, having been established long before the reforms were introduced.

An analysis of the different routes shows that the top five players operate most of the primary routes (Appendix Table 1). However, there is not one route where they operate together. On the other hand, the top three companies operate together in eight routes, all originating from Manila (Manila-Cagayan de Oro, Manila-Cebu, Manila-Davao, Manila-Dumaguete, Manila-General Santos, Manila-Iligan, Manila-Iloilo and Manila-Tagbilaran).

About 50 percent of the primary routes have at least two operators and the remaining 50 percent only have one operator (Table 4 and Appendix Table 1). Nonetheless, the presence of at least two operators in a route does not guarantee that competition exists. Of the 26 primary routes with at least two operators, substantial competition existed only in seven routes, or less than 14 percent of the total number of primary routes, while five routes were effectively monopolized, as there was only one effective competitor. The rest of the primary routes (27 percent) can be described as having only mild competition. A very good example of this is the Cebu-Bohol route where there were nine operators plying the said route but less than three were effectively competing for the passenger market. Another is the Cebu-Dumaguete route where there were six operators but only three were effectively competing.

For the secondary passenger routes, almost 59 percent were monopolized; 13 percent can be characterized by substantial competition; 13 percent as having only mild competition; and 15 percent being effectively dominated by only one competitor (Table 4 and Appendix Table 2).

Table 4. State of competition, passenger service, 1998

Route Classification	Primary		Secondary		Tertiary	
	Number	%	Number	%	Number	%
Routes with only 1 operator	26	50.0	27	58.7	166	77.6
Routes with at least 2 operators	26	50.0	19	41.3	48	22.4
Routes with only 1 effective operator	5	9.6	7	15.2	10	4.7
Routes with substantial competition	7	13.5	6	13.0	18	8.4
Routes with mild competition	12	26.9	6	13.0	20	9.3
Total number of routes	**52**		**46**		**214**	

On the other hand, monopoly was present in nearly 78 percent of the tertiary routes (Table 4 and Appendix Table 3). Operation in about 5 percent of the routes was effectively dominated by one operator. Substantial competition was found in only 8 percent of the routes.

Cargo service

Figures on freight revenue also show that the industry is highly concentrated. The five largest operators together carried 91 percent of the total revenue (Table 5). Out of the 66 operators, less than five are effectively competing.

The five major players in the cargo service, in their order, include WG&A, Sulpicio Lines, Lorenzo Shipping Corporation, Solid Shipping Corporation, and Negros Navigation. Lorenzo Shipping and Solid Shipping are purely cargo service providers. An analysis of the routes shows that there are only three routes (Manila-Cagayan de Oro, Manila-Dumaguete and Manila-General Santos), where the top five companies operate together.

Table 5. Indicators of market structure, cargo service, 1998

Indicator	Percent
Share of top five firms	91.12
Share of top three firms	70.92
Herfindahl index (HHI)	0.217
Number of operators (n)	66.0
1/n	0.015
1/HHI	4.61

Close to two-thirds of the primary and secondary cargo routes had at least two operators but less than 15 percent experienced substantial competition (Table 6 and Appendix Tables 4 & 5). On the other hand, a greater majority (76 percent) of the tertiary routes were still monopolized (Table 6 and Appendix Table 6).

Table 6. State of competition cargo service, 1998

Route Classification	Primary		Secondary		Tertiary	
	Number	%	Number	%	Number	%
Routes with only 1 operator	25	36.2	16	34.8	444	76.7
Routes with at least 2 operators	44	63.8	30	65.2	135	23.3
Routes with only 1 effective operator	7	10.1	9	19.6	39	6.7
Routes with substantial competition	10	14.5	6	13.0	38	6.5
Routes with mild competition	27	39.1	15	32.6	58	10.0
Total number of routes	**69**		**46**		**579**	

Findings common to passenger and cargo

The dominance of the top five companies, in both passenger and cargo services, was prevalent in the primary and secondary routes, regardless of the routes' state of competition (Austria 2002). In other words, they effectively control the market in these routes. Regular monitoring of the routes then becomes necessary to ensure that the top five players do not abuse their market power, more so given the fact that the percentage of routes with substantial competition is relatively small.

Substantial competition is expected in routes common to the top five or top three players. It is surprising, however, that this is not the case. In fact, there was only mild competition in those routes. Only in the Manila-Dumaguete passenger route, where the top three companies operated together, was there substantial competition.

Substantial competition is also expected in the major ports because the supposed large passenger market and volume of cargoes will draw more players into the routes. However, an analysis of the routes originating from Manila or Cebu, two of the country's major ports, shows otherwise. Most of the routes either have only one operator or are characterized by only mild competition (Table 7 and Table 8).

A further analysis of the individual routes shows that operators have their own niche markets. This is true even for the five largest operators. A

good example of this is Solid Shipping Lines that operates in only three cargo routes (Manila-Cagayan, Manila-Dumaguete and Manila-General Santos).

An analysis of the routes with only one effective competitor or mild competition shows that the dominant player or players get the bulk of the market while the rest have very small share. The market shares of the dominant player or players range from 83 percent to almost 100 percent for the routes, with only one effective competitor and from 59 percent to almost 100 percent for those with mild competition.[12] It is possible that the dominant players offer lower rates or they have more vessels and larger capacities enabling them to capture a large segment of the market, leaving the remaining segment to the rest who probably have only small capacities. Pursuing this issue, however, is beyond the scope of this paper, since it requires an analysis of the cost structures of the individual operators.

The high concentration in the tertiary routes for both passenger and cargo services may not really pose a problem, since these are usually considered "thin routes," where traffic is insufficient to attract more than one operator.[13] That is, only one operator is required to make the operation profitable and efficient. What is critical, however, is the close monitoring by MARINA of the services of operators plying the said routes to make sure that these operators do not abuse their market power to the detriment of the passengers and shippers.

Intermodal competition

The market power in the passenger service is now constrained by competition from other modes of transportation. In particular, the deregulation of the air transport industry has captured part of the first- and second-class passengers. This is particularly true during off-peak season when airlines are able to offer budget fares that come very close to the third-class passenger rates of shipping lines. The fast travel by air and the comfort that it provides more than compensate for the price difference, thereby enabling airlines to capture a sizeable chunk of the passenger market.

In addition, the budget airfares opened an alternative mode of travel to a market that formerly cannot afford to travel by air. The best examples of these are housemaids from the southern part of the country who are working in Metro Manila or students from the south studying in universities in Metro Manila. On the other hand, the introduction of fast ferries provides a good competition to airlines flying the secondary and tertiary routes.

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[12]An example is the Cebu-Ormoc passenger route where there were six operators. Yet 84 percent of the passenger traffic went to only two players. Another in Cebu-Bohol passenger route with nine operators, three of whom captured 83 percent of the market.

[13]There is less economic activity and population in the tertiary routes, implying smaller passenger and cargo traffic compared to the primary and secondary routes.

Table 7. State of competition, routes originating from Manila and Cebu, passenger services, 1998

Routes with only 1 operator	Routes with substantial competition	Routes with only 1 effective competitor	Routes with mild competition
MANILA			
Primary routes			
Mla-Batangas	Mla-Dipolog	Mla-Gen Santos	Mla-Cagayan de Oro
Mla-Dadiangas	Mla-Dumaguete	Mla-Nasipit	Mla-Cebu
Mla-San Carlos	Mla-Estancia		Mla-Davao
Mla-Zambales	Mla-Masbate		Mla-Iligan
			Mla-Iloilo
			Mla-Palawan/ Puerto Princesa
			Mla-Tagbilaran
			Mla-Zamboana
Secondary routes			
Mla-Coron	Mla-Roxas	Mla-Bacolod	Mla-Ozamis
Mla-Leyte	Mla-Surigao	Mla-Cotabato	Mla-Palompon
Mla-Mindoro		Mla-Ormoc	
Mla-Tacloban			
Tertiary routes			
Mla-Butuan			
Mla-Calubian			
Mla-Corregidor			
Mla-Dumaguit			
Mla-El Nido-Liminangcong			
Mla-Zambales			
CEBU			
Primary routes			
Cebu-Dadiangas	Cebu-Tubigon	Cebu-Jagna	Cebu-Bohol
Cebu-Davao			Cebu-Dumaguete
Cebu-Estancia			Cebu-Gen Santos
Cebu-Masbate			Cebu-Iloilo
Cebu-Nasipit			Cebu-Palawan/ Puerto Princesa
Cebu-Zamboanga			Cebu-Tagbilaran
Secondary routes			
Cebu-Bacolod	Cebu-Butuan	Cebu-Dipolog	Cebu-Dapitan
Cebu-Calbayog	Cebu-Palompon	Cebu-Ozamis	Cebu-Leyte
Cebu-Catanduanes		Cebu-Surigao	Cebu-Ormoc
Cebu-Tacloban			
Cebu-Talibon			
Tertiary routes			
Cebu-Camotes	Cebu-Naval	Cebu-Camiguin	
Cebu-Dawahon		Cebu-Iligan	
Cebu-Hiligaynon			

Source: Appendix Tables 1 to 3.

Table 8. State of competition, routes originating from Manila and Cebu, cargo services, 1998

Routes with only 1 operator	Routes with substantial competition	Routes with only 1 effective competitor	Routes with mild competition
MANILA			
Primary routes			
Mla-Batangas	Mla-Dipolog		Mla-Bacolod
Mla-Cebu-Iligan	Mla-Estancia		Mla-Cagayan
Mla-Cebu-Iligan-Dumaguete	Mla-Masbate		Mla-Cebu
Mla-Dadiangas	Mla-San Carlos		Mla-Davao
Mla-Cebu-Gen Santos			Mla-Gen Santos
Mla-Nasipit			Mla-Iligan
Mla-Puerto Princesa			Mla-Iloilo
			Mla-Palawan
			Mla-Tagbilaran
			Mla-Zamboanga
Secondary routes			
Mla-Coron	Mla-Butuan		Mla-Ormoc
Mla-Baybay	Mla-Cotabato		Mla-Ozamis
Mla-Cebu-Bacolod	Mla-Roxas		Mla-Tacloban
Mla-Maasin	Mla-Surigao		
Mla-Palompon			
Mla-Talik			
Tertiary routes			
Mla-Aklan	Mla-Jolo	Mla-Catbalogan	Mla-Escalante
Mla-Bais			
Mla-Calubian			
Mla-Danao-Escalante			
Mla-Iligan-Margosatubig			
Mla-Iligan-Sion			
Mla-Liminangcong			
Mla-Palawan-Lucena			
Mla-Polloc			
Mla-Pulupandan			
Mla-Toledo			
CEBU			
Primary routes			
Cebu-Cotabato-Dumaguete	Cebu-Jagna	Cebu-Masbate	Cebu-Bohol
Cebu-Cotabato-Gen Santos	Cebu-Zamboanga-Gen Santos	Cebu-Puerto Princesa	Cebu-Cagayan
Cebu-Dadiangas		Cebu-Tagbilaran	Cebu-Davao
Cebu-Iligan-Cagayan de Oro			Cebu-Dumaguete
Cebu-Iligan-Iloilo			Cebu-Gen Santos

Table 8. Continued

Routes with only 1 operator	Routes with substantial competition	Routes with only 1 effective competitor	Routes with mild competition
Cebu-Iloilo-Palawan Cebu-Nasipit Cebu-Tubigon			Cebu-Iloilo Cebu-Palawan Cebu-Zamboanga
Secondary routes			
	Cebu-Talibon	Cebu-Calbayog Cebu-Dapitan Cebu-Ormoc Cebu-Ozamis Cebu-Palompon Cebu-Tacloban	Cebu-Bacolod Cebu-Butuan Cebu-Dipolog Cebu-Surigao
Tertiary routes			
Cebu-Bago Cebu-Bantayan Cebu-Bantilan Cebu-Bataan Cebu-Bauan Cebu-Bilangbilang East & West Cebu-Borongan Cebu-Bulan Cebu-Cagayan de Orocillo Cebu-Calbayog-Guiwan Cebu-Camiguin Cebu-Cataingan Cebu-Ceby Cebu-Cotabato-Zamboanga Cebu-Guiuan Cebu-Iloilo-Legaspi Cebu-Iloilo-Pasacao Cebu-Jetafe Cebu-Kiwalan Cebu-Lorena Cebu-Lazi Cebu-Liloy Cebu-Magallanes Cebu-Mindoro-Tagbilaran Cebu-Nabilid Cebu-Oroquietta Cebu-Polloc Cebu-Pulupandan-Ozamis Cebu-San Carlos Cebu-San Fernando Cebu-San Jose Cebu-Sta Fe	Cebu-Bais Cebu-Batangas	Cebu-Catbalogan Cebu-Maasin Cebu-Tandag	Cebu-Camotes Cebu-Cotabato Cebu-Iligan Cebu-Legaspi Cebu-Leyte Cebu-Naval

Source: Appendix Tables 4 to 6.

In addition, the development of roads and other infrastructure in the southern part of the country opened an alternative to shipping transport.[14] Land transport from Manila to the Visayas and even to Davao has become increasingly popular to travelers because of the cheaper bus fare, providing competition to the Manila-Tacloban, Manila-Catbalogan, or Manila-Davao shipping routes.

Nonetheless, market power in the cargo service still lies in the hands of the shipping industry.

Competition

Because of the absence of data, the results of the interview with shipping lines and the executive director of the DMAP will be used in analyzing the effects of the policy reforms on competition. The results of the interview reveal that the most significant impact of the reforms is the increase in competition in the industry. Given this information and the indicators of market structure in 1998 discussed in the preceding section, it can be deduced that the industry was more concentrated prior to 1998. The merger of the shipping giants was initially perceived to be a threat by the other major players. However, since shipping companies operate by maintaining niche markets, the merger neither made the industry more concentrated nor increased the market power of the merged companies.[15] The merger in fact promoted competition. The merger was the response of the companies involved in increasing their efficiency as a result of competition.

However, the increase in competition is felt only in the primary and secondary routes. This confirms the finding in the preceding section that the majority of the tertiary routes are still run by single operators. The increase in competition in the primary and secondary routes came from additional operators.

The increase in the number of competitors in the routes is beneficial to passengers and shippers because it gave them several choices of shipping lines for the services they need. For shippers, competition did not only increase choices for their cargoes but it also increased their linkage to their ports of call. The immediate results of competition are the improvement in the quality of service.

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[14]An example of this is the construction of the Marcelo Fernan Bridge connecting Cebu City and Lapu-lapu City that has reduced the numger of passenger plying the Lapu-lapu ferry route, because some passengers now prefer to travel by land, considering the reduction in traffice caused by the construction of the bridge.

[15]The argument is based on an interview with shipping lines. The executive director of the DMAP thinks otherwise.

Quality of service

Because competition has increased, shipping operators were forced to improve the quality of their service. Customer service and satisfaction drive up competition, thereby improving efficiency. Improvement in the quality of service also meant the introduction of new facilities and amenities on board, and improvement or upgrading of facilities not only in passenger accommodation but also in ticketing and booking facilities.[16] Upgrading of facilities encouraged certification from International Specifications Maintenance and International Standards Organization.

Improvement and upgrading of facilities resulted in the modernization of the domestic fleet. Bigger and better vessels were acquired. Starting in 1993, the domestic fleet, particularly passenger cargo and general cargo, registered a big increase in tonnage such that the capacity of the industry was growing much faster than the passenger and cargo traffic (Table 9). Then, too, the average age of vessels for passenger cargo substantially declined from 21 years in 1990 to less than 10 years in 1999, indicating newer vessels plying the routes (Table 10).

However, there is also the view that the modernization of the domestic fleet resulted in the overtonnaging of the primary routes during the early stage of the reform process. Such situation, however, is expected as shipping companies adjust their operations to the new environment. Likewise, the increase in capacity during the first half of the 1990s was in anticipation of the expected increase in passenger and cargo traffic in the future. That is,

Table 9. Annual growth rate of traffic and capacity (%)

Year	Passenger		Cargo	
	Capacity	Traffic	Capacity	Traffic
1990-91	34.7	6.4	21.8	2.2
1991-92	1.1	6.4	-2.8	4.8
1992-93	0.6	7.8	2.1	5.3
1993-94	47.7	11.2	22.2	9.2
1994-95	10.4	-6.4	0.7	-4.4
1995-97	14.4	9.4	-22.1	12.6
1997-98	10.3	6.5	23.4	-1.5
1998-99	0.2	-2.0	18.4	2.5

Notes: Data for 1996 not included. Capacity is based on passenger cargo GRT for passenger and general cargo plus container GRT for cargo.
Sources: MARINA (for GRT); Philippine Statistical Yearbook (passenger traffic).

[16]One shipping operator in Cebu has a ticketing and booking office that looks better than the ticketing offices of domestic airlines.

Table 10. Average age of domestic merchant fleet, by type of service (1990-1999)

Year	Passenger Ferry	Passenger Cargo	General Cargo	Container	Ave. Merchant Fleet
1990	10.70	20.69	7.10	21.16	9.86
1991	9.59	28.03	8.02	24.90	10.90
1992	9.27	28.42	8.66	25.74	11.30
1994	7.78	14.94	10.11	24.24	11.29
1995	9.61	14.83	10.06	23.95	11.61
1997	7.63	8.98	12.14	23.40	11.86
1998	8.26	9.40	12.10	22.42	12.11
1999	9.98	9.27	13.12	24.65	12.08

Source: MARINA Domestic Fleet Inventory

since vessel acquisition takes time, vessels deployed today are not meant to address present demand only but also future capacity. However, prolonged overtonnaging could endanger competition. There is a general observation that most shipping companies are now reducing their fleet and consolidating their operations. The reduction in fleet was also partly due to the fact that the increase in demand for shipping services expected earlier did not materialize.

Improvement in facilities is best exemplified by the advent of fast craft vessels. Dubbed as "a home right at sea," these fast-speed craft extend the best of services and the best of convenience enabling passengers to crisscross islands and regions fast. The fast vessels opened a new marketing strategy in the transportation business. Operators of such vessels have established links with airlines and large shipping lines with operations originating from Manila, operating in a hub-and-spoke pattern. That is, the airlines and large shipping lines bring passengers through the primary routes while the fast vessels will bring these same passengers to their destinations in the secondary routes. Visayas is the hub of the country's fast-craft operation. The strategy has propelled commerce and trade and accelerated tourism and tourism-related activities in the southern part of the country.

However, the profitability of the fast-craft industry is considered difficult to sustain. It is said that fast craft are not appropriate yet for the country, considering the country's level of development. Fast-craft vessels generally cater to the A-B crowd, or the high-income group of the society. However,

domestic sea passengers in the country are mostly C-D crowd or low-income group of society. Likewise, fast craft are good only for short travels; but then again, most passengers in these routes are C-D crowd and a few business people who travel to places not within the reach of air transport. It is observed that some of the fast vessels have been pulled out from some of the routes.

For cargo services, improvement in quality means the availability of sufficient and appropriate services. The latter was achieved through improvement in technology in cargo services, like the use of RORO vessels and containerization.[17] However, the use of RORO vessels is more appropriate for the country, considering its archipelagic setting. Large benefits can be derived from RORO operations by avoiding handling at two ports, and the time losses and value losses deriving from the time spent at ports. On the other hand, containerization is more appropriate for long voyages, like in international shipping.

Services in the tertiary routes, on the other hand, remain unimproved because of the lack, if not absence, of competition. Old vessels and motorized bancas are still utilized, endangering the lives of passengers.

Passage and freight rates

Available data on the actual rates charged by two of the major players in the industry show that rates for both passage and cargo have increased in real terms (Tables 11 to 14). What is striking, however, is the large increase in rates after 1999 compared to the years before it. This is true regardless of the class of commodity or passenger, except for the first-class passengers of WG&A.

As earlier discussed, the DOSCON was abolished in late 1999, allowing companies full freedom to determine their deregulated rates. However, the three automatic fuel rate adjustments in 2000, totaling 19.15 percent, contributed to the large increase for the period 1999-2000. On the other hand, the general rate increase of 20 percent adopted by the shipping association in November 2000 contributed to the increase in 2000-2001. The uniform increase for all shipping operators is alarming as it has a semblance of a cartel-like arrangement.

Nonetheless, the deregulation has corrected what otherwise were very low cargo rates arising from the past regulatory system. This could be seen from the large increase (53.3 percent) in cargo rate of the Manila-Tacloban route in 1999-2000 (Table 11). Based on an interview, the route is a classic example of the large imbalance between inbound and outbound cargo traffic.

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[17]Vessels designed to use the RORO method of cargo handling are designed with a ramp at the stern. Over the ramp, connected to a pier, loaded vans pass aboard, stowing themselves under their own power. On the other hand, containerization is a method of carrying cargo in vessel container vans stowed on deck or in the cargo hold of a ship.

Table 11. Annual increase in cargo rates, Sulpicio Lines (%, 1995 prices)

Route	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
Class A						
Cebu/Davao	-2.85	1.92	-4.13	9.22	5.39	19.38
Iloilo/Bacolod						
Iloilo/Cotabato	1.71	8.14	-9.58	0.27	3.97	31.82
Manila/Bacolod					3.97	31.81
Manila/Cagayan	-2.85	1.92	-4.13	-5.03	-1.05	29.70
Manila/Cebu	-4.80	3.89	-4.02	0.27	14.80	19.38
Manila/Cotabato	1.71	8.14	-9.58	0.27	23.22	11.22
Manila/Davao	-2.85	1.92	-4.13	-5.03	8.30	18.51
Manila/Iloilo	-2.91	1.99	-4.13	0.27	18.40	15.74
Manila/Surigao	-2.82	1.89	-4.13	0.27	3.97	31.81
Manila/Tacloban	-2.85	1.92	-4.13	-17.83	53.31	9.09
Class B						
Cebu/Davao	-2.85	1.92	-4.13	0.27	14.79	19.38
Iloilo/Bacolod						
Iloilo/ Cotabato	1.12	8.69	-9.58	0.27	3.96	31.81
Manila/Bacolod					3.96	31.81
Manila/Cagayan	-2.85	1.92	-4.13	-5.03	-1.05	29.70
Manila/Cebu	-4.80	3.89	-4.02	0.27	14.79	19.38
Manila/Cotabato	2.89	6.90	-9.58	0.27	22.16	12.17
Manila/Davao	-2.85	1.92	-4.13	-5.03	8.30	18.51
Manila/Iloilo	-2.92	2.00	-4.13	0.26	14.79	19.38
Manila/Surigao	-2.85	1.92	-4.13	0.27	3.97	31.80
Manila/Tacloban	-2.85	1.91	-4.12	0.27	25.61	9.09
Class C						
Cebu/Davao	-2.85	1.93	-4.13	0.27	14.17	20.04
Iloilo/Bacolod						
Iloilo/Cotabato	1.19	8.70	-9.58	1.41	2.81	31.82
Manila/Bacolod					-3.39	31.81
Manila/Cagayan	-2.85	1.92	-4.13	-5.03	-1.05	-30.56
Manila/Cebu	-4.80	3.90	-4.02	0.27	14.80	19.38
Manila/Cotabato	1.71	8.14	-9.58	-1.82	25.84	11.22
Manila/Davao	-2.85	1.93	-4.13	-5.03	8.30	18.50
Manila/Iloilo	-2.92	6.47	-0.57	-0.32	6.67	19.38
Manila/Surigao	-2.85	1.93	-4.13	0.27	3.97	31.82
Manila/Tacloban	-2.85	1.93	-4.13	0.27	25.63	9.09

Source: Quarterly report on actual rates charged by shipping companies, as submitted to the MARINA.

Table 12. Annual increase in cargo rates, WG&A (%, 1995 prices)

Route	1998-1999	1999-2000	2000-2001
Class A			
Cebu/Davao	1.78	-6.25	0.000
Iloilo/Bacolod		-6.25	
Iloilo/Cotabato	-2.85	-1.79	0.000
Manila/Bacolod		21.13	22.602
Manila/Cagayan	-7.47	4.92	27.869
Manila/Cebu	-7.47	21.13	22.607
Manila/Cotabato	-7.47	16.76	19.707
Manila/Davao	-7.47	13.84	17.648
Manila/Iloilo	-7.47	21.13	22.602
Manila/Surigao	-7.47	-6.25	0.000
Manila/Tacloban	-7.47	21.13	22.606
Class B			
Cebu/Davao	1.78	-6.25	0.000
Iloilo/Bacolod		-6.25	
Iloilo/ Cotabato	-2.85	-1.79	0.000
Manila/Bacolod		21.12	22.598
Manila/Cagayan	-7.47	4.75	27.862
Manila/Cebu	-7.47	21.12	22.600
Manila/Cotabato	-7.47	21.12	22.599
Manila/Davao	-7.47	13.84	17.648
Manila/Iloilo	-7.47	21.08	22.637
Manila/Roxas	-7.47	-6.25	0.000
Manila/Surigao	-7.47	21.12	22.599
Manila/Tacloban	-7.47	21.12	22.600
Class C			
Cebu/Davao	1.78	-6.25	0.000
Iloilo/Bacolod		-6.25	
Iloilo/Cotabato	-2.85	-1.64	0.000
Manila/Bacolod		21.13	22.602
Manila/Cagayan	-7.47	4.74	27.868
Manila/Cebu	-7.47	21.13	22.607
Manila/Cotabato	-7.47	21.14	22.608
Manila/Davao	-7.47	13.84	17.649
Manila/Iloilo	-7.47	21.13	22.602
Manila/Roxas	-7.47	-6.25	0.000
Manila/Surigao	-7.47	21.14	22.607
Manila/Tacloban	-7.47	21.14	22.607

Source: Quarterly report on actual rates charged by shipping companies, as submitted to the MARINA.

Table 13. Annual increase in passenger rate, WG&A (%, 1995 prices)

Routes	First class suite-super			First class suite-regular			First class state-super		
	1998-1999	1999-2000	2000-2001	1998-1999	1999-2000	2000-2001	1998-1999	1999-2000	2000-2001
Iloilo/Cotabato	17.12	24.55	28.64	17.84	19.13	34.86	18.04	30.27	26.15
Manila/Bacolod		15.28	13.85		16.25	14.52		12.25	11.56
Manila/Cagayan	16.37	22.05	5.18	13.51	21.32	5.29	12.25	27.45	12.81
Manila/Cebu	9.99	20.68	8.51	7.33	19.45	8.25	11.03	22.88	11.26
Manila/Cotabato	11.93	23.19	7.56	11.16	25.87	9.53	8.48	65.66	0.00
Manila/Davao	12.06	18.26	3.27	8.92	16.23		5.62	10.30	
Manila/Iloilo	7.95	28.24	16.97	6.92	30.35	17.84	7.59	23.75	13.33
Manila/Roxas	-1.02			-2.85			16.88	19.82	3.34
Manila/Surigao	10.55	17.02	3.82	10.51	18.41	3.81	8.01	22.32	9.85

Routes	First class state-regular			First class cabin-super			First class cabin-regular		
	1998-1999	1999-2000	2000-2001	1998-1999	1999-2000	2000-2001	1998-1999	1999-2000	2000-2001
Iloilo/Cotabato	16.70	21.32	34.39	12.23	33.89	26.63	15.18		
Manila/Bacolod		11.33	10.77		17.56	5.58		19.23	5.98
Manila/Cagayan	11.33	24.96	11.52	12.96	25.75	11.96	13.00	25.00	11.96
Manila/Cebu	6.30	25.25	12.12	6.52	21.76	12.89	4.86	22.17	14.58
Manila/Cotabato	7.14	40.63	0.00	5.99	27.65	14.35	5.85	27.64	14.40
Manila/Davao	6.57	10.40		6.89	23.41	11.11	5.30	2.97	32.84
Manila/Iloilo	6.41	23.71	12.69	108.78	24.64	13.16	6.86	24.16	14.18
Manila/Roxas	17.20	19.86	3.26	18.26	19.79	3.26	17.24	19.72	3.26
Manila/Surigao	11.84	25.28	9.83	9.83	25.17	11.11	7.30	23.92	11.18

Table 13. Continued

Routes	Second class business-super			Second class business-regular			Second class tourist-super		
	1998-1999	1999-2000	2000-2001	1998-1999	1999-2000	2000-2001	1998-1999	1999-2000	2000-2001
Iloilo/Cotabato	16.14	28.52	26.65	15.15	2.68	58.15	15.15	30.30	26.34
Manila/Bacolod		14.54	13.17		26.18	13.32		19.20	16.85
Manila/Cagayan	8.15	27.08	15.01	7.88	26.71	15.19	7.95	28.95	15.13
Manila/Cebu	6.71	23.25	12.77	7.51	22.17	11.82	9.40	25.23	12.48
Manila/Cotabato	5.32	31.78	17.02	7.30	30.95	15.94	6.17	41.19	8.27
Manila/Davao	0.97	24.79	14.10	3.60	20.92	12.36	4.61	22.18	10.80
Manila/Iloilo	8.57	27.23	15.43	9.30	29.46	15.71	8.68	32.77	19.08
Manila/Roxas	-2.18	25.40		-1.22	23.75		18.46	15.66	6.95
Manila/Surigao	6.76	24.22	11.95	6.58	28.27	14.95	7.21	29.28	15.23

Routes	Second class tourist-regular			Third class economy-super			Third class economy-regular		
	1998-1999	1999-2000	2000-2001	1998-1999	1999-2000	2000-2001	1998-1999	1999-2000	2000-2001
Iloilo/Cotabato	15.84			2.99	34.77	17.39	0.31	30.12	18.01
Manila/Bacolod		19.79	17.00		19.56	16.74		20.01	17.18
Manila/Cagayan	6.69	27.14	15.17	-11.50	46.92	15.38	0.20	26.51	15.69
Manila/Cebu	10.68	28.22	12.96	0.71	26.86	16.86	-0.86	26.88	16.75
Manila/Cotabato	-15.14	70.02	16.51	1.69	34.86	20.60	0.45	31.20	18.18
Manila/Davao	6.01	22.19	10.51	0.02	22.66	15.22	-2.91	22.36	15.11
Manila/Iloilo	9.44	35.30	19.60	2.00	38.23	22.69	2.09	41.85	23.27
Manila/Roxas	17.15	15.55	6.98	2.86	24.61	13.93	0.34	25.14	14.58
Manila/Surigao	4.83	38.71	15.17	3.31	27.75	29.03	0.38	27.84	30.68

Source: Quarterly report on actual rates charged by shipping companies, as submitted to the MARINA.

Table 14. Annual increase in passenger rate, Sulpicio Lines (%, 1995 prices), 2000-2001

Route	First class suite	First class royal suite	First class cabin for 2	First class cabin for 4
	2000-2001	2000-2001	2000-2001	2000-2001
Cebu/Davao	11.11	6.51	11.11	55.51
Iloilo/Cotabato	10.94			11.07
Manila/Cagayan	22.36	-		11.11
Manila/Cebu	42.34	3.00	11.02	10.99
Manila/Cotabato	11.06			11.01
Manila/Davao	5.61	-	11.11	7.91
Manila/Iloilo	11.11			11.06
Manila/Surigao	11.05	-	10.99	11.11

	Second class tourist (basic)	Second class tourist (deluxe)	Third class economy (deluxe)
	2000-2001	2000-2001	2000-2001
Cebu/Davao	11.03	11.01	11.11
Iloilo/Cotabato	10.94		11.11
Manila/Cagayan	11.11	11.04	10.99
Manila/Cebu	10.97	11.11	11.01
Manila/Cotabato	11.07		11.11
Manila/Davao	11.08	11.11	11.07
Manila/Iloilo	11.11		11.11
Manila/Surigao	10.98	11.07	11.02

	Third class economy (basic)			
	1995-1996	1996-1997	1997-1998	2000-2001
Cebu/Davao	-1.45	3.42	-4.05	10.99
Iloilo/Cotabato	4.69	10.66	-9.58	3.11
Manila/Cagayan	18.40	8.90	-4.03	37.53
Manila/Cebu	6.39	15.48	0.28	10.14
Manila/Cotabato	3.99	11.45	-9.58	3.09
Manila/Davao	-1.35	3.54	-4.02	11.00
Manila/Iloilo	3.88	20.99	-15.85	3.17
Manila/Surigao	7.56	3.83	3.15	11.11
Manila/Tacloban	97.36	-48.25		3.09

Note: No data available for 1999.
Source: Quarterly report on actual rates charged by shipping companies, as submitted to the MARINA.

That is, a ship is full from Manila to Tacloban but not vice-versa. Hence, before deregulation, the regulated rate for the route did not reflect the cost of providing the shipping services. Given the abolition of the DOSCON process, the market could have corrected the rate and have contributed to the large increase that occurred in 2000. This argument is strengthened by the fact that the rate increase in 2000-2001 was already small (9.1 percent).

It would have been good to examine the cargo rates for basic commodities, which are containerized, because deregulation is expected to increase the rates of these commodities. This is on account of the fact that regulated rates for noncontainerized basic commodities were so low that they were unattractive to shipping operators. However, data for rates for basic commodities are not available.

Based on interviews with shipping companies, during off-peak season when there is excess capacity, cutthroat competition leads to "fare diving." Some companies go to the extent of cutting their rates to the level that is just enough to get a breakeven income or recover the cost of oil. This is true even for the regulated rates because enforcement is weak. However, the worst-case scenario is when a shipping operator practices fare diving and yet still earns profits by overloading. Discounting of this form adversely affects competition because it punishes operators who follow regulations. Likewise, overloading puts the safety of passengers at risk.

Impact of Competition

Competition creates pressure on the shipping companies to produce the quality of service desired by passengers and shippers at the least cost. In other words, competition drives them to become efficient. Companies whose quality of service is poor, whose costs are high or whose profit margins are excessive, will lose their customers to their rivals and eventually be driven out the market. Thus, only the efficient ones remain.

This section of the paper examines how competition promotes efficiency in the industry. Ideally, efficiency would be measured in terms of the costs and profit margins of companies. However, financial data are difficult to obtain; and even if they may not reflect the true financial operations, because business people maintain different books, depending on the intended use. Thus, the analysis here deals not with efficiency per se but with the process by which competition promotes the level of efficiency. This is called *transfer mechanism*, defined as the process whereby output is reallocated from less to more efficient operators (Dick 1987).

The indicator used is the turnover of firms that takes into account the entry and exit of companies arising from competition. Again, only those plying the primary and secondary routes were considered. The shipping companies are classified into two: (a) those established before the policy reforms, called the "old-order" companies; and (b) those established after

the policy reforms, called the "new-order" companies. The cutoff year is 1992, since the liberalization of routes occurred toward the end of that year. In addition, exit is defined as when an operator does not operate in any of the routes (primary and secondary) for two or three consecutive years. Mergers are considered new entrants to the industry.

Some 103 shipping companies comprised the industry during the period 1990-1998, 76 of which were established before policy reforms were instituted and 27 during the reform period (Table 15). By the end of 1998, only 37, or 49 percent, of the old-order companies still existed. That is, 51 percent are

Table 15. Entry-exit of firms, domestic shipping industry, 1990-1999

Year	Companies established before policy reforms	Companies established after policy reforms	Grand total
1990	75		75
1991	75		75
entrants	0		0
exit	1		1
1992	74		74
entrants	1		1
exit	4		4
1993	71		71
entrants	0	0	0
exit	2	0	2
1994	69	0	69
entrants	0	11	11
exit	2	0	2
1995	67	11	78
entrants	0	1	1
exit	0	0	0
1996	67	12	79
entrants	0	5	5
exit	9	1	10
1997	58	16	74
entrants	0	5	5
exit	7	2	9
1998	51	19	70
entrants	0	3	3
exit	8	7	15
1999	43	15	58
entrants	0	2	2
exit	6	1	7
Total	**37**	**16**	**53**

Sources: MARINA Route Inventory (VIS-L-13)
MARINA Vessels with Valid Authority per Link (VIS-L3A)
MARINA List of Authorities Issued (VIS-L7)

no longer operating, probably due to the stiff competition brought about by the reforms, or because they have acquired new names due to merger or acquisition.

The liberalization of route entry, on the other hand, enabled 27 new shipping companies to enter the industry during the period 1993-1998. Nonetheless, only 16, or 59 percent, survived by the end of 1999. In other words, 11 exited the industry, having possibly succumbed to competition.

However, despite the high survival rate of the new-order companies (59 percent as against 49 percent for the old-order companies), the surviving companies are still dominated by the old-order ones. That is, 70 percent of the surviving firms were established before the reforms were instituted. Likewise, these operators control about 64 percent of the industry's cargo capacity and 63 percent of passenger capacity.

It is important to note that exit from the industry was highest in 1998 (15 operators) when there was financial crisis. On the other hand, entry was highest in 1994 (11 operators).

A further analysis of the surviving companies shows that 43 percent of them are growing in their capacity; 34 percent experienced a decline in their capacity while the remaining 23 percent did not register any change in their capacity since they were established (Table 16). There was also a redistribution of capacity from among the surviving companies. The share of the growing companies increased from 51 percent in 1990 (or when they were established) to 86 percent by 1998. Their absolute tonnage in 1998 was 43 percent higher. On the other hand, the share of the declining companies went down from 48 percent to 12 percent.

If competition is effective, the redistribution of capacity from declining to growing companies should be accompanied by the redistribution of output from the less efficient to more efficient companies. Unfortunately, whether this in fact occurred with the surviving companies in 1998 cannot be analyzed from the data available. For it is possible that some of the growing companies were able to increase their capacities for reasons other than commercial efficiency. On the other hand, it is also possible that companies experience a decline in capacity, not because of commercial pressure but because of marine loss. This could be an interesting area of further research to ascertain whether the competition arising from the reforms in fact increases the level of efficiency of the industry.

MARINA's Role in a Deregulated and Liberalized Environment

MARINA takes charge of regulating the shipping industry. The agency's regulatory functions cover interisland rates, entry, and safety and service standards.

Under a deregulated and liberalized environment, MARINA should change the nature of how it regulates the industry so as to create the much

Table 16. Surviving firms, growing, and declining based on net registered tonnage (NRT) change

	No. of firms	NRT beg	%	NRT end	%
Old-Order Firms					
Growing	16	88,465.29	36.64	135,883.60	79.89
Declining	14	151,228.58	62.63	32,438.96	16.07
No change	7	1,755.40	0.73	1,755.40	1.03
Total	37	241,449.27	100.00	170,077.96	100.00
New-Order Firms					
Growing	3	72,283.08	96.64	94,508.97	97.52
Declining	1	406.00	0.54	289.61	0.30
No change	3	2,110.08	2.82	2,110.08	2.18
Total	7	74,799.16	100.00	96,908.66	100.00
Industry					
Growing	19	160,748.37	50.83	230,392.57	86.3
Declining	15	151,634.58	47.95	32,728.57	12.3
No change	10	3,865.43	1.22	3,865.48	3.2
Total	44	361,248.43	100.00	266,986.62	100.00

Note: Date for nine firms are either incomplete or unavailable.
Source: MARINA Route Inventory (VIS-L-13)

needed competition and contestability in the market. This is crucial since less competition has been realized, even after implementing policy reforms. Instead of just responding to applications for new or expanded shipping services, MARINA should be proactive where the unavailability of desirable services is concerned. It should identify underdeveloped routes, or routes where there is shortage of vessels, or routes that are not served, and then facilitate investments for these routes by publicly inviting investors. MARINA should allow new entrants to the tertiary routes, where there is practically no safe, reliable, and adequate service and where, more often than not, there is rampant overloading of passengers during peak seasons.

MARINA should also strengthen its developmental functions. Of particular concern to the shipping industry is the Authority's apparent weak monitoring capabilities. Attention to this concern becomes all the more important since, as discussed earlier, only a small percentage of the routes (whether primary, secondary, or tertiary) experience substantial competition and that the top five companies of the industry dominate the routes, regardless of the routes' state of competition. Under the current setup (MC

No. 153), MARINA intervenes only if passengers and shippers file a complaint against the rates and services of shipping companies and only if sufficient basis and justification is submitted. Such regulation should be modified. Monitoring should be on a regular basis (and not only when complaints are filed) to ensure that the interests of shippers and passengers are protected against overcharging and poor service standards, and that the dominant firm or firms in each route do not abuse their market power. Regular monitoring would, in the first place, prevent shipping companies from making actions contrary to the regulations.

Monitoring should be done in tandem with the Philippine Coast Guard (PCG), which gives vessels the authority to sail. As discussed earlier, a shipping operator can resort to fare diving or large discounts and still earn profits by overloading its passengers. Such practice can be avoided if the PCG does strict monitoring of the vessels.

However, for MARINA to be able to exercise its monitoring functions effectively and for it to be able to identify routes requiring adequate shipping services, it must establish a database that is easily accessible to the shipping operators, investors, researchers, policymakers, and the public in general. Current regulations require shipping companies to submit to the MARINA quarterly reports of passenger / cargo traffic and the actual rates charged by their vessels, whether regulated or deregulated. These reports, however, are not being processed into a database.[18]

The database should include, at the very least, passenger / cargo traffic and freight / passage rates by shipping company and by route; number of operators per route and vessel capacity per route. The effectiveness of MARINA as an investment facilitator and regulator on a day-to-day basis hinges much on the availability of this critical information. MARINA therefore needs to establish a database, complete with computer facilities and human resources.

One particular issue that has confronted MARINA since the advent of deregulation is the basis for the approval of upward adjustment of regulated rates. The approach currently used is still the revenue deficiency method. However, the approach is no longer appropriate as the financial statements of shipping companies include their deregulated operations.

Areas for competition policy and further reforms

Liberalization and deregulation should not be undertaken in isolation. The policy reforms should be complemented by competition policy to ensure that the competition and other benefits arising from liberalization and

[18]Based on the author's experience in doing this study. No data on freight/passage rates or passenger/cargo traffic by routes and by company are readily available.

deregulation are not eroded by possible development of market power among shipping lines. This is important, as substantial competition exists in only a small percentage of the routes and that cartel-like arrangements have been observed to exist in the industry.

One area for competition policy is merger and acquisition or consolidation. Fierce competition can push companies into bankruptcy, or merger and consolidation. The latter can have both positive and negative effects. On the positive side, efficiency could be enhanced as mergers allow shipping companies to consolidate their functions like marketing, ticketing, repair and maintenance, etc. On the negative side, there is the fear that the end result will be a large company becoming so dominant that it can exert considerable market power.

The country's shipping industry has seen mergers and consolidations taking place in response to the reforms. This situation, however, has yet to result in an increase in market power of the merged companies, which are primarily more concerned about consolidating their functions instead of increasing their market share. The picture could change, however, once the consolidation process has been completed.

Hence, a policy on merger and consolidation should be defined in such a way that mergers and consolidations would not result in reduced service and less competition. The efficiency effects should be weighed against market power effects. In short, mergers should be undertaken with the best interests of the riding public.

Another important area to consider is the development of tertiary routes. The shipping industry has become an important source of competition for the air transport industry in providing transport services in the country's islands for the south (Austria 2002). The system of providing government incentives to shipping operators developing the tertiary routes should therefore be designed in such a way that the efficiency arising from the intermodal competition will not be distorted.

More reforms

The government should continue its deregulation efforts. Of particular interest is the regulated rate for the second-class for non-DOT-accredited vessels that either offer only first-and second-class accommodation, or whose third-class accommodation is less than 50 percent of the total passenger capacity. This regulation has no rationale, as the first- and second-class passenger services have already been deregulated.

One important area awaiting deregulation is the third-class passenger service. About 70 percent of passengers take the third-class service, the majority of whom also come from the C-D crowd. The regulated rate for this service is regarded by shipping companies as very low and cannot cover cost. The operation is therefore cross-subsidized, often by cargo revenue. Since most of

the cargo rates are already deregulated, passenger-cargo vessels are placed at a disadvantage against pure cargo vessels, because cross-subsidization is no longer feasible under a deregulated environment. This is also aggravated by the fact that current regulation requires passenger vessels to allocate 50 percent of their passenger capacity to third-class passengers, except for DOT-accredited vessels. Given the sensitivity of the issue because of its social implications, any attempt to deregulate the third-class passenger service should be carefully looked into. A balance should be struck between social objectives and economic efficiency.

Two other significant areas of reform are the ceiling on the return on investment and the application of the revenue deficiency method for upward adjustment of regulated rates. Both are anti-competitive. The ceiling on ROI serves as a disincentive for efficient shipping companies because the return may not be commensurate with the level of service rendered. Based on the results of the interview, many of the shipping companies have regarded shipping as less profitable than other competing investments. The ceiling on ROI makes the industry less attractive to investors.

On the other hand, the revenue deficiency method awards inefficient companies because it guarantees return, regardless of the level of efficiency. As presented earlier, the method can no longer be applied under the new environment because the financial statements of companies also include their deregulated operations.

Summary and conclusion

This paper has examined the effects of liberalization and deregulation in the shipping industry on competition and market structure. The study shows that the policy reforms have improved competition, undermining industry practices leading to an improvement in the quality of service. The reforms provided new operators with the opportunity to gain entry in routes where entry was previously restricted by the "grandfather rules."

Nonetheless, substantial competition exists in only a small percentage of the routes. A greater majority of the routes are still effectively monopolized, or experienced only mild competition. The top three or five companies in the industry effectively dominate the different routes. What is more striking is the large increase in cargo and passenger rates after the implementation of the reforms. The cartel-like arrangement that is observed to exist in the industry may have contributed to this.

The policy reform has been a slow process and much is still desired. There is a need for competition policy to ensure that the benefits derived from liberalization and deregulation will not be eroded by the possible abuse of market power among the shipping lines. Likewise, the commercial success or failure of shipping companies in a liberalized and deregulated

environment hinges much on their responsiveness to market requirements; in short, their competitiveness. However, competitiveness depends on a host of factors that include shipping costs and physical and administrative infrastructure. It has always been argued that domestic shipping costs (fuel, interest rate, insurance, and income and freight taxes) and handling costs in the country are higher than those of other countries in the region (Lorenzo 1997; PISA 2001). On the other hand, port facilities in the country are far below world-class standards, with some ports still undeveloped.

Finally, the high domestic shipping cost is creating pressure to lift the cabotage law to enable domestic shippers to avail themselves of lower shipping costs from foreign vessels. Scrapping this law will expose interisland shipping to the pressures of international competition. This would then be advantageous to the country in the long run, as it will force all local industry players to increase their efficiency to survive the competition. However, the government needs to identify the measures and actions that need to be undertaken, including their sequencing, during the transition to full liberalization to prepare domestic shipping lines for global competition. At the very least, the domestic shipping environment should be improved by addressing the issues affecting its competitiveness.

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