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Philippine Domestic Shipping Transport Industry: State of Competition and Market Structure

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PHILIPPINE INSTITUTE FOR DEVELOPMENT STUDIES
Surian sa mga Pag-aaral Pangkaunlaran ng Pilipinas

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Introduction

The shipping transport industry plays a very important role in the country's development. Considering the archipelagic setting of the country, shipping provides the primary means of interisland transport. That is, the bulk of domestic trade is transported by shipping; interisland travel, especially in the southern part of the country, is also largely dependent on shipping. Considering this role, an efficient shipping industry that facilitates the movement of commodities, products and people is vital to the growth of the country. This is one where passengers and cargoes get to their destinations on time and in good and safe condition at the least possible cost. For cargoes, especially agricultural commodities, the transport should be in a manner where their physical condition at their place of destination allows them to be marketed at the most competitive price.

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

The industry had been highly regulated until policy reforms were instituted in the 1990s in response to the continuing inefficiency. This study examines the inefficiency of the industry in terms of the complex interaction between regulation and competition; and then analyzes the effects of the policy reforms on competition and market structure. The scope of the paper is limited to the interisland liner shipping industry because this is the sector where regulation is highly concentrated and whose viability is highly sensitive to government policy.

The paper is organized as follows. Section 2 provides a brief profile of the industry. Section 3 discusses the contestability of markets in the shipping industry, including the arguments for and against regulating the industry. Section 4 examines the regulatory framework and policies prior to the implementation of the policy reforms. This is followed by a discussion of the policy reforms made through liberalization and deregulation in Section 5.

Section 6 is an analysis of the effects of the reforms on market structure and competition, including the impact of competition on efficiency. Section 7 is a discussion of the role of the MARINA in a deregulated environment. Areas for competition policy and further reforms are then identified in Section 8. The summary and conclusions are presented in Section 9.

II

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Domestic Shipping Transport Industry: Brief Profile

Marine or shipping transport services consist of three types of activities namely, maritime transport services, maritime auxiliary services and port services (Fink, Mattoo and Neagu, 2000). *Marine transport* 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. *Marine auxiliary services* refer to activities related to cargo manipulation in ports and on ships. Under the General Agreement on Trade in Services (GATS) classification, these include cargo handling, storage and warehousing, custom clearance, container station and depot, maritime agency and freight forwarding. On the other hand, *port services* refer to those activities related solely to ship management in ports. Under GATS classification, these include pilotage, towing and tug assistance, provisioning, fuelling and watering, garbage collecting and disposal, port captain's services, navigation aids, shore-based operational services and emergency repair facilities. This paper will concentrate on marine transport, as the other two types of activities have separate issues of their own.

The country's domestic marine or shipping transport is composed of three sectors: liner, tramp and industrial carriage. *Liner shipping* refers to the operation of domestic water transportation that offers their services to the public without discrimination to any user, have regular ports of call and have fixed sailing schedules and frequency. *Tramp shipping*, on the other hand, refers to the operation of freight vessels that are not plying a regular route but are hired on a contractual basis by shippers under mutually agreed terms and usually carry cargoes of bulky commodities. *Industrial carriage* refers to the shipping operations of companies arising from the necessity to cater to the needs of their own enterprises. Of the three sectors, only liner shipping is regulated by the government.

The shipping transport industry contributes about half a percent to the country's gross domestic product and this share has remained unchanged throughout the 1990s (Table 1). Passenger traffic carried by liner shipping

Table 1. Gross value added in water transport (million pesos at constant 1985 prices)

Year	Gross value added	% Share to GDP
1990	4,197	0.6
1991	3,724	0.5
1992	3,696	0.5
1993	3,711	0.5
1994	3,770	0.5
1995	3,876	0.5
1996	4,020	0.5
1997	4,209	0.5
1998	4,325	0.5
1999	4,444	0.5
2000	4,518	0.5

Sources: 1999 NSO Phil. Statistical Yearbook; National Income Accounts of the Philippines

increased from almost 30 million in 1990 to 44.4 million in 2000, registering a 4.05 percent average annual growth rate during the period (Table 2). The volume of domestic cargo carried also went up from 58 million metric tons in 1990 to 76.9 million metric tons in 2000 or a growth rate of almost 2.87 percent per year.

The domestic shipping industry also plays an important role in the country's international trade by carrying, between ports in the country, cargoes intended for exports and cargoes arriving as imports, or what are referred to as transit cargoes. Between 1991 and 1998, transit cargoes grew from 597.5 thousand metric tons to 757.3 thousand metric tons or by 2.67 percent per annum (Table 2).

The domestic shipping fleet is dominated by general cargo in terms of gross registered tonnage (GRT) (Figure 1). Starting 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 generated (Table 3). Also very striking was the large drop in the average age of the passenger cargo fleet (Table 4). As will be discussed in Section 6 of the paper, all these changes have much to do with the liberalization and deregulation measures instituted in the industry in the 1990s.

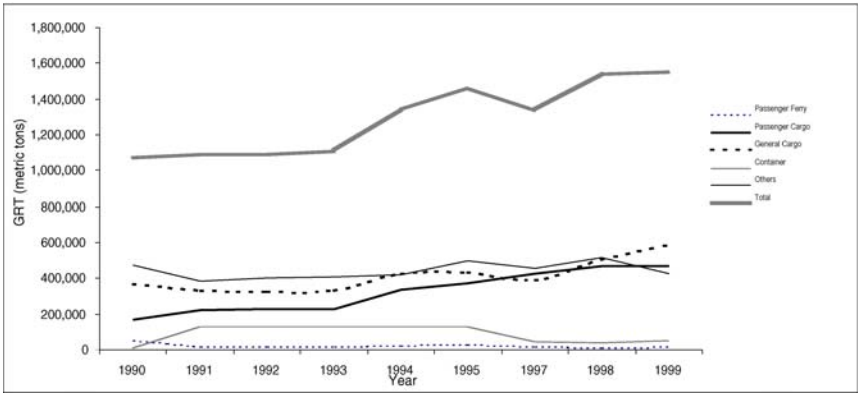
Liner shipping routes are classified as primary, secondary, tertiary and developmental routes. The classification is based on ports being served, population and economic development in the area, and the cargo/passenger

Table 2. Domestic Passenger and cargo traffic, 1990-2000

Year	Passenger	Cargo (metric tons)	
		Domestic	Transit cargo
1990	29,820,025	57,956,401	NA
1991	31,715,983	58,634,411	597,467
1992	33,734,547	61,845,505	230,863
1993	36,365,332	65,072,550	267,765
1994	40,444,607	71,108,392	232,839
1995	37,873,205	68,100,654	133,617
1996	40,043,006	71,955,594	662,961
1997	41,414,647	76,150,041	650,822
1998	44,110,790	74,928,058	687,369
1999	43,228,478	76,538,895	933,691
2000	44,371,866	76,914,255	757,272
Average annual growth rate (%)			
1990-2000	4.05	2.87	2.67

Notes: (1) NA means not available (1990 domestic cargo data includes both domestic and transit cargo)
(2) Average growth rate for transit cargo from 1991-2000
Source: NSO Philippine Statistical Yearbook

Figure 1. Total GRT of domestic merchant fleet, type of service, 1990-1999



Notes:
(1) The 1996 inventory does not include vessels with sizes 3 GT and below such that the resulting figures turned out to be smaller than the 1995 figures, thereby rendering the statistics non-comparable for purposes of trend determination.
(2) "Others" include liquid cargo/ lighterage, barging, tanker, towing, salvaging, pleasure, pilotage, and others with no information.
Source: MARINA Domestic Fleet Inventory

Table 3. 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)

Table 4. 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

Notes:
(1) The 1996 inventory does not include vessels with sizes 3 GT and below such that the resulting figures turned out to be smaller than the 1995 figures, thereby rendering the statistics non-comparable for purposes of trend determination.
(2) No data available for 1993.
Source: MARINA Domestic Fleet Inventory

throughput attendant to the linkages fostered. Primary routes include those that handle domestic volume of national significance and usually cover the major ports of the country. Secondary routes include those that handle domestic volume of regional significance and are linked to ports of lesser throughputs than major ports. Tertiary routes are feeder routes that handle cargoes consolidated and destined for primary and secondary ports. Finally, devel-

opmental routes do not have existing shipping operators but shipping operations are economically desirable because of their potentials in agriculture, tourism or mining. Operation along these routes, during the initial stages, is not financially viable.

III

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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: (i) there are no barriers to entry, that is, no extra cost borne by new entrants that are not borne by the incumbents; (ii) there are no sunk costs, that is costs that cannot be recouped when a firm withdraws from the industry; (iii) the time for the incumbents to change their price in response to the entry is longer than the time for the 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 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 that which is allowed by the current of 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 were 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 a particular group 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 that prevent market forces take their course on the functioning of the industry. The common argument for the need to regulate liner shipping is based on the supposed danger of chronic instability due to inherent tendencies toward ruinous competition and monopoly (Renardet Sauti Consulting Engineers 1986). That is, the industry is highly vulnerable to price and capacity fluctuations that lead to ruinous competition and eventually to monopoly, after the weak firms are driven out.

Price instability

The 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 about 25-30 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, it is also argued that the above argument is not plausible as shipping operators do not in practice 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 rate levels.

Nevertheless, pricecutting is practiced but only in so far as there is overcapacity or overtonnaging in the industry. And this can lead to rate instability.

Monopoly

Another argument for government regulation is the danger of monopoly. A natural monopoly occurs when there are economies of scale that allows a large company to charge lower prices because its unit costs are lower than 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 also argued, however, that there are no significant economies of scale in the shipping industry (Renardet Sauti Consulting Engineers 1986) or that economies of scale is 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 with larger ships.

On the number of ships, 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 costs. 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 would 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. In family shipping businesses, the practice 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 underrecording 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 terms for payment. But 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 try and 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 can allow them to charge a premium rate and earn a more than normal profit. But such cannot last long as the premium invites other companies to improve on the quality of their service. 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.

IV

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Regulatory Framework and Policies: Prereform Period

Regulation of the domestic liner shipping industry was first introduced in the country during the American colonial rule. In fact, the pattern of the early regulations closely resembled those that applied to American railroads and motor trucking industry. The then Board of Transportation (BOT) was in charge of regulating the industry until the Maritime Industry Authority (MARINA) took over the function in 1985. Regulation covers route entry and rate/tariff determination.

Liner rate regulations

Regulations for liner rates began in 1928. The objective was to protect the public from indiscriminate charging by shipping companies and, at the same time, protect the investment of liner operators by preventing ruinous competition. Rates, or what are commonly called as tariffs, were fixed by the government. To simplify the task of setting rates for a large number of commodities or passengers, rates were structured by commodity or passenger class. Commodities were initially classified as Class A for processed goods or high value manufactured goods, Class B for semiprocessed goods or low value manufactured goods, Class C for unprocessed commodities and Basic for rice, palay, corn, corngrits, fruits, vegetables and livestocks. As will be discussed later, some of the Basic commodities were reclassified when policy reforms were introduced into the industry. Passenger services, on the other hand, were classified as First Class, Second Class and Third Class depending on the kind of services and accommodation offered. Starting in 1983, the tariff structure for both passenger and cargo provided different rates with respect to three distance ranges namely, 0-100 miles, 101-300 miles and over 300 miles.

The tariff structure prescribes a set of formulae for user charges that vary in accordance with the commodity classification or service class of passengers and the direct distance between the ports of origin and destination.

The formula for cargo rates has a fixed and distance-related component while the passage rate only has a distance-related component. The fixed component reflects the cost of the vessel while loading or discharging in port and it is computed in pesos revenue per ton. On the other hand, the variable or distance-related component reflects the cost of the vessel's time while at sea and is computed in pesos per revenue ton mile or pesos per passenger mile. A revenue ton is either a measurement ton of one cubic meter, or a weight ton of 1000 kilograms, whichever gives the higher revenue to the shipping operator.

The first rate formulae instituted in 1928 were originally cost-based, with a uniform tariff per nautical mile for most cargoes. Cost-based tariff is one which passes on the costs of providing the service to shippers without discriminating between cargoes. By the 1980s, however, the rates were both cost- and value-based in that while the fixed and variable components were retained, high-value goods had higher rates than low-value goods. Such practice allows the cross-subsidization of the shipment of low-value goods.

For cargo rates, there was an alternative to the class rates. The liner operators had the option to charge an ad valorem rate on any goods valued at over P1,000 per ton. The original objective was to limit the *ad valorem* rates only on very high value goods, but with the passage of time and as inflation increases the prices of all commodities, the ad valorem option became applicable to more and more commodities. The rate was 0.5 percent in 1928 and at that time, it excluded almost all goods in the interisland trade. By the 1980s, however, the threshold included most commodities.

Throughout the period 1928-1985, the basic structure of tariffs remained largely unchanged (Renardet Sauti Consulting Engineers 1986). Only the level of rates changed by periodic across-the-board increases, basically to reflect changes in inflation rate. For the ad valorem rate, the rate is increased by the square of the inflation rate. The rate first increases automatically as the price of the cargo increases and then a second time with the official increase in the ad valorem percentage rate. From 0.5 percent in 1928, the rate had risen to 7.3 percent by 1989. In the 1980s, the ad valorem rate became so high that it represented serious deviations from appropriate charges based on shipping costs (PTF 1989).

For the class rates (passage and freights rates), upward adjustments were made using the revenue deficiency method. Under this method, rate adjustments are made based on the revenues that need to be generated by liner operators to provide a rate of return (ROI) consistent with Common-

wealth Act No.146 or the Public Service Act of 1936. The Act declared the provision of shipping services, along with other services[1], as a public service. The maximum allowable ROI for public utilities was 12 percent and it has remained at this level until today. Under the revenue deficiency method, the required revenue is compared to the actual revenue (based on audited financial statements provided by the ship operators), and the difference indicated the deficiency in rates.

The method is too dependent on the financial reports of shipping operators. Before the reforms were instituted, MARINA combined the financial statements of all members of the Domestic Shipping Association (DSA) to get the average for the industry from which to base the increase and then apply an across-the-board rate increase. 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 as revenue was insufficient to obtain the prescribed ROI. Thus, even inefficient firms, which would normally be driven out of the industry if market forces are allowed to operate, were made to earn profits. Since the method guarantees operators of profits regardless of their performance, there is no pressure on the part of shipowners to search for more efficient means of meeting the country's demand for shipping services (Balisacan 1989). Worse, the method has made the level of shipping rates too high over the years. It resulted in rates that did not consider the actual cost of providing cargo or passenger services.

While the government fixed the rates, enforcement was weak or minimal. Because the rates were too high (both ad valorem and class rates) and the enforcement was weak, discounting became the rule. A discount of 15-25 percent was common in the 1980s (Nathan Associates 1991).

At the same time, however, the freight rates for Basic commodities and the passage rates, particularly for the Third Class, were not permitted to increase as rapidly as the general inflation rate, for social reasons.

Route licensing

Originally, the shipping industry was exempted from government regulation under the Public Service Act of requiring operators of all public service to obtain a certificate of public convenience (CPC) (Chapter II, Section (13a) of

[1] Also included as public service are any common carrier, railroad, street railway, subway or motor vehicle engaged in the transportation of passengers or freight or both, shipyard, marine railways, wharf or dock, ice plant, ice-refrigeration plant, canal, irrigation system, gas, electric light, water supply and power, petroleum, sewerage system, wire or wireless communication system, broadcasting stations and other similar public service.

the Act). A CPC is an authorization to operate a public service; and in this case, the authorization to a vessel for domestic water transportation services for commercial use. Route licensing, however, was introduced in 1972. The commonly accepted reason for its introduction was that the major routes were overtonnaged while many of the other routes were inadequately served or had no service (Nathan Associates 1991). The objective therefore of regulating entry was to bring capacity and demand into balance.

For a CPC to be granted, the following requisites must be complied with:

- The applicant must be a citizen of the Philippines, or a corporation or a co-partnership, association or joint-stock company constituted and organized under the laws of the Philippines, at least 60 percent of the stock or paid-up capital belongs entirely to Philippine citizens;
- The applicant must be financially capable of undertaking the proposed shipping service and of meeting the responsibilities incident to its operation; and,
- The applicant must prove that the operations of the public service proposed and authorized to do business will promote the public interests in a proper and suitable manner.

CPCs are given on a vessel-to-vessel basis, specifying the exact route and schedule. There was a deliberate policy, throughout the pre-reform period, of limiting competition by restricting market entry. The general principles for issuing a CPC were prior-operator, prior-applicant and protection of investment or what are commonly referred to as "grandfather rules." The prior applicant rule means that priority is given to the first applicant, among the various applicants, for a CPC. Prior operator rule means the priority is given to an existing authorized[2] operator in a route, and in each segment of the route, by virtue of a CPC or provisional authority (PA) issued. On the other hand, protection of investment rule means the protection and conservation of investment that have already been made by operators.

Following are the two types of application for a license:

- An application for a route for which the applicant/operator has no franchise, i.e. new entrant in a route.

  If the route being applied for is already serviced by a franchised[3] operator, the BOT/MARINA conducts a market evaluation upon receipt of an application for the route to see if the entry of additional

[2] An authorized operator is one who has been issued either a certificate of public convenience (CPC) or provisional authority (PA).

[3] A franchised operator is one that has been issued a certificate of public convenience (CPC).

operators in the route is justifiable. If the demand warrants additional fleet, the application is not immediately approved. The existing operator is first given the priority to put in additional vessel/s to meet the demand; only when he cannot meet the demand within six months will the application of a new operator is approved.

However, if the route is already served by nonfranchised operators, the "prior applicant rule" applies.

For a development route, entry is allowed and the new entrant is protected in his investment by not allowing another operator to ply the same route until such time that he has recovered his investment. Since there was no limit in the number of years by which the operator is protected to recoup his investment, there was no incentive for him to make his operation efficient. On the other hand, if market conditions warranted additional tonnage, entry was open to additional operator/s, but subject to the "prior operator rule." That is, priority was given to the original operator to put in the additional tonnage.

- An application to expand capacity in a route for which the operator already has a franchise.

  If the demand called for additional capacity, a franchised operator was allowed to increase 50 percent to his capacity, at minimum interval of three years. If there were several existing franchised operators in the same route, the "prior-applicant rule" applied.

  However, in all the above rules, the past service records of the operator/s or the new applicant/s were not taken into consideration.

During the early years of franchising, compliance was low. Some liners did not register and those that did were issued CPCs that did not specify their routes (1986 study). In 1977, a freezing program was introduced in the industry through Memorandum Circular (MC) No. 11 with the aim to control overtonnaging in the industry. Under the program, all operators were supposed to secure provisional authority to operate. But there was confusion in the administration of franchising. Prior to assuming the full responsibility of handling franchising, MARINA served as the technical arm of the BOT. But since MARINA and BOT issued approvals independently of each other, the program did not improve the capability of the government to control and monitor capacity.

In 1978, MC No. 16 was issued declaring a policy to protect established shipping companies already providing adequate service from undue competition. Under the policy, *no new* operator was allowed to enter primary and secondary routes and only one operator was allowed for the tertiary route. Where there was more than one existing operator in a tertiary route, merger

or joint services was promoted or encouraged. MC No. 26, issued in 1982, introduced the rationalization of the interisland shipping operations. Among other things, the circular required all operators (i) to observe their authorized routes, sailing frequency and schedules, and that any deviation from such without appropriate authority shall be penalized; (ii) not to abandon, withdraw or suspend service without authority from the BOT; and (iii) not to reroute vessels and doing so was illegal if pursued without an amendment of the CPC. Under the circular, too, acquisition of new vessels was regulated, limiting it only to the modernization of tonnage in the route and giving priority to existing operators. [4]

Impact of and problems arising from government regulations

The past regulations of the domestic shipping industry had adverse impact on the economy. This is well documented in the findings of several studies and is summarized in this section. These documents include the Interisland Shipping Regulation Study prepared by the Renardet Sauti Consulting Engineers in 1986; findings of the Presidential Task Force (PTF) on Interisland Shipping Industry in 1989; the Philippine Transport Sector Review in 1990; and the studies prepared by Nathan Associates, Inc., the Interisland Liner Shipping Rate Rationalization Study in 1991 and the Liner Shipping Route Study in 1994.

Overtonnaging

As discussed earlier, regulating the routes was meant to reduce overtonnaging of the industry. Over the years, however, onvertonnaging has persisted. This was manifested in low load factors in most cases. In short, route franchising did not succeed in bringing capacity and demand on balance although it moderately succeeded in limiting overtonnaging in individual routes.

Several factors contributed to the persistent overtonnaging. Route franchising can only deal with the distribution of capacity between routes but not on the absolute level of capacity of the industry. That is, if a vessel was refused entry in one route, it could find its way in another route; or if it was withdrawn from a particular route, it was only rerouted to another route. Hence, the overall capacity of the industry was maintained or even increased if the

[4] Acquisition of new vessels is allowed if it can be proven that there is general deterioration of services in terms of quality and reliability. All existing operators are given equal opportunity and advance notice on the need to modernize; and if no application is received within six months, application from new entrants are entertained on a first come, first served basis.

vessel involved was new. The origin of overtonnaging is at the vessel import approval stage. In the past, refusal of import approvals rarely happened.

The 12 percent cap on the return on investment is also said to have contributed to the overtonnaging of the industry. One practice in the industry to circumvent the cap is for shipping operators to horizontally expand by acquiring more vessels thereby increasing their assets, which in turn, form part in the computation of the required revenue to obtain the ROI. Such practice does not promote efficiency where the use of vessels is maximized at the least cost. Additional vessels and tonnage should be dictated by an increase in demand and not by the desire to meet the prescribed ROI.

The high rates arising from the revenue deficiency method also caused the overcapacity in the industry. The high rates were sufficient to guarantee profits even at low load factors.

Flaws in the tariff structure

The tariff structure established in 1928 suffered from major flaws. First, the rate differentials between classes did not reflect differences in the cost of providing services for each commodity group but instead it was an attempt by the government to incorporate consideration of "what the market will bear" into the regulation process. The product value was generally supposed to indicate what the market would bear as a proxy for price elasticity of demand for the product. As discussed below, this resulted to 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 services at all times. This was true, in particular, for the Basic commodities. At the same time, rates for other commodities were set too high to permit them to bear the charges.

Third, the application of a uniform rate formula for all routes was inappropriate as it did not consider both cargo inflow imbalances and cargo mixes. The unit cost per ton of cargo increases as capacity utilization falls. High capacity utilization rate cannot be achieved if there are large imbalances in the inbound and outbound traffic. Hence, rates for routes with a good balance of traffic in the two directions were not appropriate for routes with large imbalances. Also, the mixture of class of commodities determined the earning potentials of the routes. Hence, routes with a high proportion of Class A or Class B commodities in the total cargo traffic had higher earning potentials than routes with a higher proportion of Class C (Basic) commodities.

Effects on the economy

The flaws in the tariff structure and rate setting created adverse effects on the economy. In general, the adverse effects fell disproportionately on the producers and traders of agricultural commodities. The very low rates for basic commodities limited the availability of appropriate services for agricultural products. In particular, grain shippers from Mindanao had difficulty in obtaining sufficient cargo space because the rates were too low[5] to make the commodities attractive to operators. In turn, the unavailability of sufficient liner services, inhibited the growth of inter-island trade and agricultural diversification; and resulted to high storage costs, commodity value losses resulting from deterioration and high charges for the alternative and limited services of trampers and air transport.

On the other hand, since the passage rates were not permitted to increase with the general inflation rate, they failed to keep pace with the increasing cost of providing passenger services. The practice in general is for cargo services to subsidize passenger services. This made profitability in passenger service difficult to achieve and resulted to both the tendency to overload and provide very low service standards, which in turn, resulted in some of the major maritime disasters in the country s history. It also hindered the introduction of liner services on new routes as it raised the minimum level of traffic required to make the service profitable.

Overall, the past regulatory system protected inefficient industry operation.

[5] The rates are lower than those imposed by tramp operators for hauling grains.

V

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Liberalization, Deregulation and Other Government Policies

The problems arising from the regulations of the industry and the major maritime disasters and accidents that claimed thousands of lives towards the end of the 1980s prompted the government to finally introduce policy reforms in the industry (PTF 1989). The reforms came through the deregulation of the passage and freight rates and the liberalization of routes. As discussed below, the process of reform was implemented gradually starting 1989 and is still continuing at present.

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 while at the same time 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 5. Changes in policies and regulations were first initiated in 1989 under MC No. 46 as a result of the recommendations of the Presidential Task Force on the Inter-island Shipping Industry. Early reforms included the (i) abolition of the charging of ad valorem rates, although a 3/10 percent surcharge of the declared value of the commodity was imposed, except for Basic commodities; (ii) reclassification of Basic commodities to Class C (Basic); and (iii) deregulation of the first and second class passage rates.[6] 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 will 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

[6] First Class passenger rate was first deregulated in 1983.

Table 5. 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	(i) charging of ad valorem rates abolished; (ii) Class Basic reclassified as Class C (Basic); (iii) 50% of passenger capacity allocated for 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	(i) Rates for refrigerated, transit and livestock deregulated; (ii) Fork tariff system used for determining regulated rates.
MC 59, April 1991	Implementing guidelines on rate increase	deregulated	deregulated	regulated	regulated	regulated	regulated	regulated	(i) Increase in the fork rate by 12% and 8% for passage and freight rates, respectively.
MC 66, May 1992	Implementing guidelines on the rollback of interisland lines rates	deregulated	deregulated	regulated	regulated	regulated	regulated	regulated	(i) 6% 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	(i) automatic fuel adjustment whenever fuel prices increase/decrease by at least 10%; (ii) increase in the upper/ lower limit of the fork tariff from +/-5% to +10%/-15% effective Jan. 1993

Table 5. 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 71, October 1992	Implementing guidelines on the DOTC Dept Order No. 92-587 defining the policy framework on the regulation of transport services	deregulated deregulated deregulated deregulated	deregulated deregulated deregulated deregulated	regulated	deregulated	deregulated	regulated	regulated	(i) Class C (Basic) to be reclassified into Class C in 1993.
MC 80, November 1993	Policy guidelines in the regulation of domestic transport services			regulated	deregulated	deregulated	regulated	abolished; reclassified as Class C	(i) DOT-accredited vessels exempted from allocating 50% of their passenger capacity to 3rd class passenger; (ii) 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)			regulated	deregulated	deregulated	deregulated, except non-containerized basic commodities		(i) implementation of deregulated rates follow DOSCON process; (ii) passage & freight rates for monopolized/cartelized routes regulated; (iii) fork tariff system still applies for regulated rates
MC 153, Dec 1999	Revised rules and regulations implementing deregulation of shipping rates			regulated	deregulated	deregulated	deregulated, except non-containerized basic commodities		(i) DOSCON process abolished.

Note: The table is a chronological presentation of the EO and MC. The remarks column only include the salient features not included in the preceding circulars, unless stated as abolished.

the introduction of the fork tariff system for the determination of freight and passage rates.[7] 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 for the rates within the band set by the government. The first fork tariff system had a lower and upper limit of ˇ5 percent and +5 percent of the reference rate, respectively. This means that a domestic shipping operator may increase its 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 by 8 percent for the freight rate. In 1992 (MC No. 66), a 6 percent rollback on freight rates was adopted. Also, 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 increase or decrease by at least 10 percent was also instituted. 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.

The early reforms, however, were unable to correct the problems identified earlier. For one, the flexibility provided by the fork tariff system was very limited as the rates could not vary to the extent that operating costs vary with respect to routes, ship technology especially with the introduction of container service and roll-on roll-off (RORO) service, quality of packaging, and changes in cargo handling methods. Second, the compulsory requirement to allocate 50 percent of passenger capacity to accommodate 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 towards the end of 1992 (MC No. 67), this time involving the freight rates for Class A and Class B cargoes.

[7] Only members of the Conference of Interisland Shipowners and Operators and any 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.

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 as serving tourist areas were exempted from the requirement of allocating 50 percent of their total passenger capacity to Third Class passengers; and accordingly, their rates were deregulated. However, if the vessel only has First Class and Second Class passenger accommodation or where the Third Class passenger accommodation is 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. (EO) 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; but this time, the rate increase is computed on a per company basis.

The implementation of deregulated freight rates, however, was 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 the process of consultation 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 that was previously exercised by the government through quasi-judicial procedures.

The DOSCON process, 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 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 one 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 may no

longer be 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. While there are still areas that remain regulated, these can be overcome and can be strategic areas for modernizing the industry. For example, shipping companies can upgrade their vessels and facilities and be accredited with DOT and be exempted from allocating 50 percent of their passenger capacity to third class and enjoy the deregulated rates. Also, the exemption of noncontainerized basic commodities from deregulation should encourage the use of other shipping technology in transporting these commodities, like RORO vessels.

Much is still desired, however. The rate for Third Class passenger is yet to be deregulated.

Route liberalization

Liberalization of the routes was first introduced in 1992. Two general principles are observed for the issuance of a CPC. First, the interest of the public is paramount. That is, the interest of the public shall prevail over the grandfather rules of the prereform namely, prior applicant, prior operator and protection of investment. Second, the presumption of public need for a service is deemed in favor of the applicant for a CPC while the burden of proving that there is no need for a proposed service 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 a big contrast to the prereform period regulation where an operator in a developmental route is accorded protection of his investment for an indefinite period, that is, until he has recovered his investment. This change in rule would definitely encourage the operator to increase his efficiency for him to be able 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 the entry 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 such and after informing the public. An operator, however, forfeits his CPC 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 service 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 does not pose any conflict with the schedule and frequency of service of existing operators and that no route is left unserved by the rerouting.

The initial liberalization efforts were further strengthened with the issuance of EO 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. Also, when capacity is increased through the replacement of a vessel, the CPC of the vessel to be replaced is revoked. The revocation of CPC will ensure that the vessel replaced will not be used anywhere else and hence, will not result in increase in 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 prereform regulation where the CPCs of vessels replaced were 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.

Other government policies

Cabotage Law

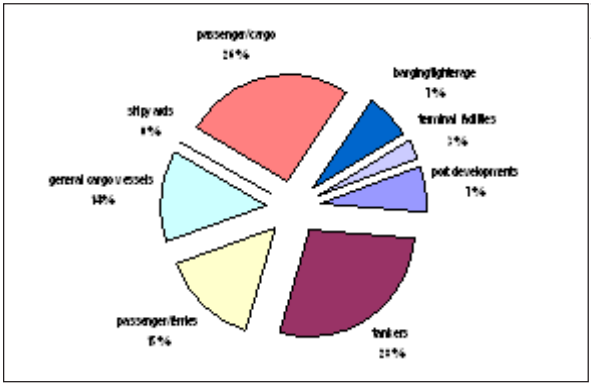
Foreign shipping lines are not allowed to ply the country's interisland routes.

Domestic Shipping Modernization Program

To complement the liberalization and deregulation efforts, the government implemented the Domestic Shipping Modernization Program (DSMP) funded by a loan package from the Overseas Economic Cooperation Fund (OECF) of Japan and administered by the Development Bank of the Philippines (DBP). The program has two phases: Phase I (1995-2000) with a loan package of 14.8 billion yen or roughly P3.91 billion for the modernization of interisland vessels; and Phase II (1999-2005) with a loan package of 19.5 billion yen or P6.7 billion for the development of port facilities in rural areas.

Phase I was used to finance the replacement of vessels (new buildings and/or second hand), rehabilitation and/or upgrading (bringing to class) and modernization of interisland fleet; acquisition, rehabilitation, and modernization of shipyards and port cargo handling equipment; and working capital. As of June 2001, almost 84 percent of the package has been loaned out, most of which went to passenger-cargo vessels and tankers (Figure 2).

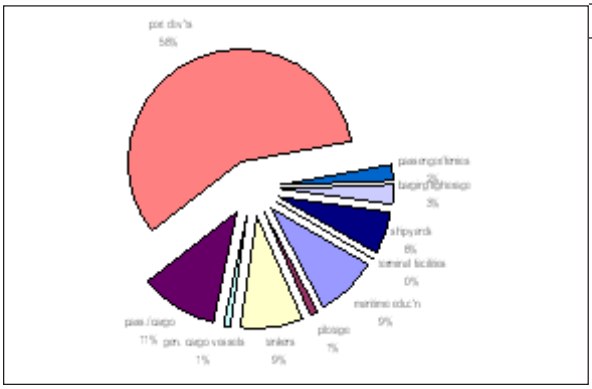
Figure 2. Loans released by sector, DSMP I, as of June 2001



DSMP I distribution per sector	
	(in ₱million)
tankers	872.52
gen. cargo vessels	474.65
pass/ cargo	868.20
pass/ ferries	489.00
barging/ lighterage	231.02
shipyards	8.30
terminal facilities	95.50
port developments	240.00
	3,279.19

Source: IRR, Development Bank of the Philippines (DBP)

Figure 3. Loans released by sector, DSMP II, as of June 2001



DSMP II distribution per sector	
	(in₱million)
tankers	505.50
gen. cargo vessels	29.38
pass/ cargo	672.50
pass/ ferries	118.00
barging/ lighterage	174.00
pilotage	47.00
shipyards	322.00
terminal facilities	10.50
port developments	3,388.70
maritime education	502.10
	5,769.68

Note: Maritime education not included in Phase I
Source: IRR, DBP

This explains the increase in the capacity (GRT) of passenger vessels and the decline in their average age as discussed earlier in Section 2 of the paper.

For Phase II, as of June 2001, a total of P5.8 billion from the loan package has been released and distributed across the various sectors as shown in Figure 3.

VI

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Market Structure and Competition

The Herfindahl-Hirschman Index (HHI) is used as an indicator of market structure. The index is measured as the sum of the squares of the market shares. 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 sized 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, i.e., tertiary routes were excluded in the computation. Since the tertiary routes involve short distance travel and hence more frequencies of trips, the total passengers and cargoes plying these routes would be larger in number compared to the primary and secondary routes. And 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 6.

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 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 have

made an impact on the market structure could be made, the annual reports of shipping companies were not complete.[8] 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).

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.[9] Thus, data on cargo revenue was used.

Furthermore, since the latest secondary data available is 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.

Table 6. Classification of routes

	Classification	Indicator
(1)	routes with only one (1) operator	
	monopoly	$HHI = 1$
(2)	routes with at least two (2) operators	
i.	only one (1)effective competitor	$1 < \frac{1}{HHI} < 1.4$
ii.	substantial competition	$\frac{1}{HHI} \leq$ # of perators
iii.	Mild competition	$1.4 < \frac{1}{HHI} <$ # of perators

Market structure

Passenger Service

The HHI shows that the domestic shipping industry is highly concentrated (Table 7). The five largest operators accounted for as much as 90 percent of

[8] The 1993 data were initially processed but the annual reports of some of the shipping companies were missing. MARINA has data on annual total passenger and cargo traffic but not by route and shipping company which is what is needed in analyzing market structure and competition.

[9] Units of measurements include kg, metric tons, and pieces.

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.

Table 7. Indicators of 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

The five largest players in the passenger service (from largest to smallest), in descending order, are Negros Navigation Company, WG&A, Sulpicio Lines, Philippine Fast Ferry Corporation and Cebu Ferries Corporation. One significant characteristic of these operators is that, three of them are new competitors, being established only during the reform period. WG&A is a product of the merger of three shipping giants (William Lines 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 had been pivotal to the birth of the fast ferry industry in the country. The other two players (Negros Navigation and Sulpicio Lines) are old time players, being established long before the reforms were introduced.

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 8 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 exist 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.

Table 8. 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	27	58.7
Routes with at least 2 operators	26	50.0	19	41.3	19	41.3
Routes with only 1 effective operator	5	9.6	7	15.2	7	15.2
Routes with substantial competition	7	13.5	6	13.0	6	13.0
Routes with mild competition	14	26.9	6	13.0	6	13.0
Total number of routes	**52**		**46**		**46**	

Note: See Appendix Tables 1 to 3 for details.

For the secondary passenger routes, almost 59 percent was monopolized; 13 percent was characterized by substantial competition; 13 percent had only mild competition; and 15 percent was effectively dominated by only one competitor (Table 8 and Appendix Table 2).

On the other hand, monopoly was present in nearly 78 percent of the tertiary routes (Table 8 and Appendix Table 3). Operation in about 5 percent of the routes were 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 9). Out of the 66 operators, less than five are effectively competing.

The five largest 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 services.

Table 9. Indicators of market structure, cargo service, 1998

Indicators	
Share of top five firms	91.12
Share of top three firms	70.92
Herfindahl index (HHI)	0.217
Number of operators (n)	66.00
1/n	0.015
1/HHI	4.61

Analysis of the routes shows that there are only three routes (Manila-Cagayan, Manila-Dumaguete and Manila-General Santos) where the top five companies operate together. Furthermore, 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 10 and Appendix Tables 4 and 5). On the other hand, a greater majority (76 percent) of the tertiary routes were still monopolized (Table 10 and Appendix Table 6).

Table 10. 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**	

Note: See Appendix Tables 4 to 6 for details.

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 (Table 11). 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

Table 11. Distribution of top 5 players as effective competitors, by type of routes, passenger and cargo services, 1998.

Route Classification	Routes with only 1 operator	Routes with substantial competition	Routes with only 1 effective competitor	Routes with mild competition
PASSENGER				
PRIMARY				
Total number of routes	26	7	5	44
	Negros Navigation 12	Negros Navigation 2	Negros Navigation 2	Negros Navigation 6
	Sulpicio Lines 9	Sulpicio Lines 6	WG&A 2	Sulpicio Lines 4
	WG&A 1	WG&A 3	Cebu Ferries 1	WG&A 8
	Cebu Ferries 1	Cebu Ferries 2		Cebu Ferries 1
	Others 3	Others 1		Phil Fast Ferry 2
				Others 3
SECONDARY				
Total number of routes	27	6	7	6
	Negros Navigation 5	Negros Navigation 1	Negros Navigation 1	Negros Navigation 2
	Sulpicio Lines 10	Sulpicio Lines 3	Sulpicio Lines 1	WG&A 2
	WG&A 1	WG&A 2	WG&A 1	Cebu Ferries 1
	Cebu Ferries 2	Cebu Ferries 2	Cebu Ferries 1	PNI Fast Ferry 1
	Others 9	Others 2	Others 3	Others 3
TERTIARY				
Total number of routes	166	18	10	21
	Negros Navigation 14	Sulpicio Lines 1	Phil. Fast Ferry 1	Others 21
	Sulpicio Lines 14	Cebu Ferries 1	Cebu Ferries 2	
	WG&A 1	Others 17	Others 7	
	Phil. Fast Ferry 1			
	Others 136			
CARGO SERVICE				
PRIMARY				
Total number of routes	25	10	7	27
	Negros Navigation 1	Negros Navigation 2	Negros Navigation 1	Negros Navigation 11
	Sulpicio Lines 6	Sulpicio Lines 5	Sulpicio Lines 2	Sulpicio Lines 11
	WG&A 3	WG&A 2	WG&A 1	WG&A 17
	Others 15	Others 7	Others 3	Solid Shipping Lines 3
				Lorenzo Shipping 4
				Others 11
SECONDARY				
Total number of routes	16	6	9	15
	Sulpicio Lines 7	Negros Navigation 1	Negros Navigation 1	Negros Navigation 3
	Others 9	Sulpicio Lines 4	Sulpicio Lines 1	Sulpicio Lines 7
		WG&A 4	Others 7	WG&A 7
		Lorenzo Shipping 1		Others 10
		Others 2		
TERTIARY				
Total number of routes	444	38	39	58
	Negros Navigation 3	Negros Navigation 1	Negros Navigation 1	Negros Navigation 2
	Sulpicio Lines 22	Sulpicio Lines 2	Sulpicio Lines 3	Sulpicio Lines 5
	WG&A 6	WG&A 1	WG&A 3	WG&A 6
	Others 413	Lorenzo Shipping 3	Lorenzo Shipping 1	Lorenzo Shipping 2
		Others 38	Others 31	Others 52

Note: The number corresponding to each player represents the number of routes where it operates (out of the total number of routes).
Source: Appendix Tables 1 to 6.

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, the analysis of the routes originating from Manila or Cebu, two of the countries major ports, shows otherwise. Most of the routes either have only one operator or are characterized by only mild competition (Table 12 and Table 13).

A further analysis of the individual routes shows that operators have their own niche markets. And 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). Also, the five largest players are not always the dominant player in the routes where they operate. An example of this is the Dumaguete-Zamboanga cargo route that includes WG&A and Sulpicio Lines as operators but which are not the dominant players.

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 (Table 14). An example is the Cebu-Ormoc passenger route where there were six operators but 84 percent of the passenger traffic went to only two players. Another is the Cebu-Bohol passenger route with nine operators but only three operators captured 83 percent of the market. 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 and leaving the crumbs 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. That is, only one operator is required to make the operation profitable and efficient. As discussed in Section 2 of the paper, there is less economic activity and population in the tertiary routes, implying smaller passenger and cargo traffic compared to the primary and secondary routes. 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 welfare of passengers and shippers.

Table 12. 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-Zamboanga
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			
Cebu-Jetafe			
Cebu-Lapu-lapu			
Cebu-Larena			
Cebu-Lazi			
Cebu-Sta Fe			

Source: Appendix Tables 1 to 3.

Table 13. 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-San Carlos		Mla-Davao
Mla-Dadiangas			Mla-Dumaguete
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-Tilik			
Tertiary routes			
Mla-Aklan	Mla-Jolo	Mla-Catbalogan	Mla-Escalante
Mla-Bais			
Mla-Calubian			
Mla-Danao Escalante			
Mla-Iligan-Margosatubig			
Mla-Illigan-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-Zamboanga-Gen Santos	Cebu-Puerto Princesa	Cebu-Cagayan
Cebu-Cotabato-Gen Santos		Cebu-Tagbilaran	Cebu-Davao
			Cebu-Dumaguete
Cebu-Dadiangas			Cebu-Gen Santos
Cebu-Dumaguete-Gen Santos			Cebu-Iloilo
			Cebu-Palawan
Cebu-Iligan-Cagayan de Oro			Cebu-Zamboanga
Cebu-Iligan-Iloilo			
Cebu-Iloilo-Palawan			
Cebu-Nasipit			
Cebu-Tubigon			

Table 13. Continued

Routes with only 1 operator	Routes with substantial competition	Routes with only 1 effective competitor	Routes with mild competition
(CEBU con't.)			
Secondary routes			
	Cebu-Talibon	Cebu-Calbayog	Cebu-Bacolod
		Ceub-Dapitan	Cebu-Butuan
		Cebu-Ormoc	Cebu-Dipolog
		Cebu-Ozamis	Cebu-Surigao
		Cebu-Palompon	
		Cebu-Tacloban	
Tertiary routes			
Cebu-Bago	Cebu-Bais	Cebu-Catbalogan	Cebu-Camotes
Cebu-Bantayan	Cebu-Batangas	Cebu-Maasin	Cebu-Cotabato
Cebu-Bantilan		Cebu-Tandag	Cebu-Iligan
Cebu-Bataan			Cebu-Legaspi
Cebu-Bauan			Cebu-Leyte
Cebu-Bilangbilangan East & West			Cebu-Naval
Cebu-Borongan			
Cebu-Bulan			
Cebu-Cagayan de Orocillo			
Cebu-Calbayog-Guiwan			
Cebu-Camiguin			
Cebu-Cataingan			
Cebu-Cebu			
Cebu-Cotabato-Zamboanga			
Cebu-Guiuan			
Cebu-Iloilo-Legaspi			
Cebu-Iloilo-Pasacao			
Cebu-Jetafe			
Cebu-Kiwalan			
Cebu-Larena			
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			

Source: Appendix Tables 4 to 6.

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

Table 14. Range of market shares of dominant players in routes with only 1 effective competitor and routes with mild competition (%)

Routes with only one (1) effective competitor	Routes with mild competition
Passenger	
84.1 - 98.6	78.3 - 98.5
83.2 - 99.9	70.0 - 94.4
89.0 - 99.9	71.3 - 93.9
Cargo	
84.0 - 99.0	59.0 - 99.8
87.2 - 98.9	67.3 - 99.8
87.2 - 98.9	67.3 - 99.8

Source: Appendix Tables 1 to 6

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 good competition to airlines flying the secondary and tertiary routes.

Also, the development of roads and other infrastructures (like bridges) in the southern part of the country opened an alternative to shipping transport. An example of this is the construction of the Marcelo Fernan Bridge connecting Cebu City and Lapu-lapu City that has reduced the number of passengers plying the Lapu-lapu-Cebu ferry route because some passengers now prefer to travel by land considering the reduction in traffic caused by the construction of the bridge. Also, 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 interviews 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 player. But since shipping companies operate by maintaining niche markets, the merger did not make the industry more concentrated nor did it increase the market power of the merged companies.[10] 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 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 in the routes. The reforms provided new operators the opportunity to gain entry in routes where entry was previously restricted by the grandfather rules.

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 service they require. 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.

Quality of service

Because competition increased, shipping operators were forced to improve on 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.[11] Upgrading of facilities encouraged certification from ISM and ISO.

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

Improvement and upgrading of facilities resulted to the modernization of the domestic fleet. Bigger and better vessels were acquired. As shown earlier in Table 3, there was an increase in industry fleet particularly for general cargo and passenger cargo starting 1993. Also, 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 4).

It is also said, however, 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, since vessel acquisition takes time, vessels deployed today are meant not only to address present demand but also future capacity. However, prolonged overtonnaging could endanger competition. There is a general observation, however, 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 fastcraft vessels. Dubbed as "a home right at sea," these fast speed crafts extend the best of services and the best of convenience enabling passengers to crisscross islands and regions in a short period of travel. The fast craft vessels opened a new marketing strategy in the transportation business. Operators of fast craft 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 craft vessels will bring these same passengers to their destinations in the secondary routes. Visayas is the hub of the country's fastcrafts 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 fastcraft industry is observed to be difficult to sustain. It is said that fast crafts are not yet appropriate for the country, considering the country's level of development. Fastcraft vessels generally cater to the A-B crowd or those belonging to high-income group of the society. Domestic sea passengers in the country are mostly the C-D crowd

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

or low-income group of the society. Likewise, fast crafts are good only for short distance travel; but then again, most passengers in these routes are the C-D crowd and a few businessmen who travel to places not within the reach of air transport. It is observed that some of the fast-craft 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.[12] 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 as well as time losses and value losses derived 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, remained unimproved because of the lack, if not absence, of competition. Old vessels and motorized bancas are still used, 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 15 to 18). 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 passenger of WG&A.

As discussed earlier in the paper, the DOSCON process 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%) in cargo rate of the Manila-Tacloban route in 1999-2000 (Table 14). Based on the interview, the route is a classic example of

[12] 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 15. Annual increase in cargo rates, Sulpicio Lines (%, 1995 prices)

Route	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
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 of Shipping Companies submitted to the MARINA.

Table 16. Annual increase in cargo votes, WG&A (%, 1995 prices)

Routes	1998-99	1999-00	2000-01
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 of Shipping Companies submitted to the MARINA.

Table 17. Annual increase in passenger rate, WG&A (%, 1995 prices)

Routes	1st class suite-super			1st class suite-regular			1st class state-super		
	1998-99	1999-2000	1999-01	1998-99	1999-2000	1999-01	1998-99	1999-2000	1999-01
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	35.66	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	1st class state-regular			1st class cabin-super			1st class cabin-regular		
	1998-99	1999-2000	1999-01	1998-99	1999-2000	1999-01	1998-99	1999-2000	1999-01
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

Routes	2nd class business-super			2nd class business-regular			2nd class tourist-super		
	1998-99	1999-2000	1999-01	1998-99	1999-2000	1999-01	1998-99	1999-2000	1999-01
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	2nd class tourist-regular			3rd class economy-super			3rd class economy-regular		
	1998-99	1999-2000	1999-01	1998-99	1999-2000	1999-01	1998-99	1999-2000	1999-01
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 of Shipping Companies submitted to the MARINA.

Table 18. Annual increase in passenger rate, Sulpicio Lines (%, 1995 prices), 2000-2001

Route	1st class suite	1st class royal suite	1st class cabin for 2	1st 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

	2nd class tourist (basic)	2nd class tourist (deluxe)	3rd 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

	3rd 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 of Shipping Companies submitted to the MARINA.

the large imbalance between inbound and outbound cargo traffic. That is, the 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 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%).

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

Based on interviews with shipping companies, during off-peak season when there is excess capacity, cut-throat 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 break-even income or recover the cost of oil. This is true even for regulated rates because enforcement is weak. But the worst scenario is when a shipping operator practices fare diving and yet still earns profits by overloading. This practice adversely affects competition because it punishes operators who follow regulations. Likewise, overloading puts the safety of passengers at risk.

Impact of competition

Competition pressures 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 if ever they could be obtained, they may not reflect the true financial operations as it is accepted that businessmen maintain different books of accounts depending on what purpose these will be used. Thus, the analysis here deals, not on efficiency *per se*, but on the process by which competition promotes the level of efficiency. This is called the 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: (i) those established before the policy reforms, called the "old order" companies; and (ii) those established after the policy reforms, called the "new order" companies. The cut off year is 1992 since the liberalization of routes occurred towards the end of that year. Also, 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 in the industry.

There were about 103 shipping companies that operated in the industry during the period 1990-1998, 76 of which were established before policy reforms were instituted and 27 were established during the reform period (Table 19). By the end of 1998, only 37 or 49 percent of the old order companies still existed. That is, 51 percent are no longer operating, probably due to the stiff competition brought about by the reforms or 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 1998. In other words, 11 exited the industry, that is, they could have 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 companies. That is, 70 percent of the surviving firms were established before the reforms. 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 show 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 20). 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.

Table 19. 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
MARINA Vessels with Valid Authority per Link
MARINA List of Authorities Issued

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. 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.

VII

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The Role of MARINA in a Deregulated Environment

As presented earlier, MARINA takes charge of regulating the shipping industry. Created under Presidential Decree No. 474 in 1974, the agency was mandated, among other things, to provide for the effective supervision, regulation and rationalization of the organizational management, ownership and operations of all water transport utilities and other maritime enterprises. Before the reforms were instituted, the agency's regulatory functions include the regulation of interisland rates, regulation of entry by granting of route certificate of public convenience or provisionary authority, and regulation of 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 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 and granting investment incentives. MARINA should focus on allowing new entrants in the tertiary routes where there is practically no safe, reliable and adequate service and where there is rampant overloading of passengers during peak seasons.

MARINA should also strengthen its developmental functions. Of particular concern is MARINA'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 will intervene 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, i.e. 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.

Table 20. 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	19.07
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	3,865.48	1.22	3,865.48	3.2
Total	44	316,248.43	100.00	266,986.62	100.00

Note: Data for nine firms are either incomplete or not
Source: MARINA Route Inventory

Monitoring should be done in tandem with the Philippine Coast Guard (PCG) that gives the 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 strictly monitors 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 ship-

ping services, a database that is easily accessible to the shipping operators, investors, researchers, policymakers, and the public in general must be established. 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. Nonetheless, such reports remain as reports and are not being processed into a database.[13]

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 invest on establishing the database and on its computer facilities and human resources.

MARINA should focus its regulatory power on service standards and safety regulations to avoid maritime accidents. It should ensure the seaworthiness of the vessels (condition of the hull, requirements for navigational/firefighting/life-saving equipment, manning requirements, etc.) and that shipping operators strictly observe the minimum service standards.

One particular issue confronting the MARINA these days 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.

[13] This is based on the experience of the author in making this study. No data on freight/passage rates or passenger/cargo traffic by routes and by company are readily available.

VIII

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Areas for Competition Policy and Further Reforms

Competition policy

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 deregulation are not eroded by possible development of market power among shipping lines. As discussed earlier, 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 on merger and acquisition or consolidation. Fierce competition can push companies into bankruptcy, merger or consolidation. The latter can have both positive and negative effects. On the positive side, efficiency could be enhanced as it allows 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 merger and consolidation happening in response to the reforms. The merger did not result to an increase in market power of the merged companies, at least for now, since the current concern of the companies is more on consolidating their functions and not much on increasing their market share. The picture could change, however, once the consolidation has been completed.

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

Another important area to consider is the development of the tertiary routes. The shipping industry has become an important source of competition for the air transport industry in providing transport services to the country's islands in the south (Austria 2000). The system of providing gov-

ernment 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.

Further reforms

The government should continue its deregulation efforts. Of particular interest is the regulated rate for non-DOT accredited vessels that either only offers 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 class and second class passenger services have already been deregulated.

One important issue remaining for deregulation is the third class passenger service. About 70 percent of passengers take the third class service, 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, and 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 for 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 anticompetitive. The ceiling on ROI serves as a disincentive for efficient shipping companies because the return may not be commensurate to the level of service rendered. Based on the results of the interview, many of the shipping companies regard 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.

IX

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Summary and Conclusions

Regulation has a long history in the country's shipping industry. This paper examined the conflicting forces of past government regulations and competition and their impact on the industry. The restrictive regulations have weakened, if not prevented, competition thereby rendering them ineffective in achieving the avowed aim of regulatory policy, which is to promote efficiency.

The inefficiency and the consequent adverse impacts on the economy prompted the government to institute reforms through liberalization and deregulation in the 1990s. Competition has improved, undermining industry practices leading to an improvement in the quality of service. Nonetheless, substantial competition exists in only a small percentage of the routes. A greater majority of the routes are still effectively monopolized or experience only mild competition. The top three or top five companies in the industry effectively dominate the different routes, regardless of the routes' state of competition. What is more striking is the large increase in cargo and passenger rates after 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 in frastructures. 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 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 in the country is causing the pressure for the lifting of the cabotage law to enable domestic shippers avail of lower shipping costs from foreign vessels. The lifting of the cabotage law will expose interisland shipping to the pressures of international competition. This would be advantageous for the country in the long run as it will increase the pressure for efficiency among all players in the industry. However, the government needs to identify what measures and actions must be undertaken, including their sequencing, during the transition to full liberalization in order to prepare domestic shipping lines against foreign competition. At the very least, the domestic shipping environment should be improved by addressing the domestic issues (as mentioned above) affecting the industry's competitiveness.

Appendixes

Appendix Table 1. Dominant/effective players per route per type of market, passenger traffic, primary routes, 1998

Route	Passsengers Carried	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Routes with only 1 operator						
Batangas/ Puerto Princesa	35,801	1	1.00	1.00	Sicat Ferries, Inc.	100.0
Cagayan de Oro/ Tagbilaran	3,682	1	1.00	1.00	Cebu Ferries Corp	100.0
Cebu/ Dadiangas	4,663	1	1.00	1.00	Sulpicio Lines Inc	100.0
Cebu/ Davao	11,797	1	1.00	1.00	Sulpicio Lines Inc	100.0
Cebu/ Estancia	264	1	1.00	1.00	Negros Navigation	100.0
Cebu/ Masbate	1,855	1	1.00	1.00	Sulpicio Lines Inc	100.0
Cebu/ Nasipit	4,244	1	1.00	1.00	Sulpicio Lines Inc	100.0
Cebu/ Zamboanga	7,311	1	1.00	1.00	George and Peter Lines	100.0
Dadiangas/ Zamboanga	34,521	1	1.00	1.00	Sulpicio Lines Inc	100.0
Davao/ Zamboanga	5,381	1	1.00	1.00	Negros Navigation	100.0
Dumaguete/ Ozamis	10,995	1	1.00	1.00	Sulpicio Lines Inc	100.0
Dumaguete/ Zamboanga	9,671	1	1.00	1.00	George and Peter Lines	100.0
General Santos/ Zamboanga	12,199	1	1.00	1.00	Negros Navigation	100.0
Iligan/ Tagbilaran	3,056	1	1.00	1.00	Sulpicio Lines Inc	100.0
Iloilo (Estancia)/ Zamboanga	22,869	1	1.00	1.00	Sulpicio Lines Inc	100.0
Iloilo/ Davao	7,919	1	1.00	1.00	Negros Navigation	100.0
Iloilo/ General Santos	25,370	1	1.00	1.00	Negros Navigation	100.0
Iloilo/ Iligan	8,799	1	1.00	1.00	Negros Navigation	100.0
Iloilo/ Palawan	22,285	1	1.00	1.00	Negros Navigation	100.0
Manila/ Batangas	128,225	1	1.00	1.00	WG&A Philippines	100.0
Manila/ Dadiangas	18,608	1	1.00	1.00	Sulpicio Lines Inc	100.0
Manila/ San Carlos	5,960	1	1.00	1.00	Negros Navigation	100.0
Manila/ Zambales	6,460	1	1.00	1.00	Negros Navigation	100.0
Palawan/ Cagayan de Oro	3,311	1	1.00	1.00	Negros Navigation	100.0
Palawan/ Davao	127	1	1.00	1.00	Negros Navigation	100.0
Palawan/ General Santos	225	1	1.00	1.00	Negros Navigation	100.0
Routes with at least 2 operators						
<u>Routes with substantial competition</u>						
Cagayan de Oro/ Jagna	197,636	2	0.54	1.86	Cebu Ferries Corp, Sulpicio Lines	100.0
Cebu/ Cagayan de Oro	158,758	2	0.54	1.87	Cebu Ferries Corp, Sulpicio Lines	100.0
Cebu/ Tubigon	181,314	3	0.35	2.89	Company B*, Arrel Shipping, Victoriano Millanes	100.0
Manila/ Dipolog	91,099	2	0.54	1.84	WG&A, Sulpicio Lines	100.0
Manila/ Dumaguete	356,754	3	0.37	2.70	Sulpicio Lines, WG&A, Negros Navigation	100.0
Manila/ Estancia	56,761	2	0.61	1.64	Sulpicio Lines, Negros Navigation	100.0
Manila/ Masbate	139,328	2	0.51	1.96	WG&A, Sulpicio Lines	100.0

Appendix Table 1. Continued

Route	Passsengers Carried	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Routes with only 1 effective competitor						
Cebu/ Jagna	2,916	2	0.88	1.13	Cebu Ferries Corp	93.8
Davao/ General Santos	2,359	2	0.97	1.03	Negros Navigation	98.6
Dumaguete/ Tagbilaran	51,695	2	0.86	1.17	Negros Navigation	92.2
Manila/ Gen. Santos	100,322	3	0.73	1.37	WG&A Philippines	84.1
Manila/ Nasipit	103,980	3	0.97	1.03	WG&A Philippines	98.5
Routes with mild competition						
Cebu/ Bohol	239,093	9	0.37	2.69	Romulo Wagwag, Ormoc Enterprises, MY Lines	83.2
Cebu/ Dumaguete	277,557	6	0.33	3.07	Phil Fast Ferry, Negros Navigation, George and Peter Lines	84.3
Cebu/ General Santos	1,746	2	0.71	1.40	Sulpicio Lines	82.8
Cebu/ Iloilo	12,524	3	0.51	1.97	Cokaliong Shipping, Negros Navigation	98.5
Cebu/ Palawan/ Puerto Princesa	11,257	3	0.68	1.47	Cebu Ferries Corp	80.4
Cebu/ Tagbilaran	472,250	3	0.54	1.87	Phil Fast Ferry, Negros Navigation	96.5
Manila/ Cagayan de Oro	406,331	3	0.40	2.49	Sulpicio Lines, WG&A	87.6
Manila/ Cebu	663,471	3	0.52	1.92	WG&A, Sulpicio Lines	97.7
Manila/ Davao	175,719	3	0.60	1.66	WG&A, Sulpicio Lines	90.8
Manila/ Iligan	128,207	3	0.64	1.56	WG&A	78.3
Manila/ Iloilo	645,024	3	0.60	1.66	Negros Navigation, WG&A	98.7
Manila/ Palawan/ Puerto Princesa	186,402	3	0.54	1.86	WG&A, Negros Navigation	96.3
Manila/ Tagbilaran	192,526	3	0.46	2.17	WG&A, Negros Navigation	93.1
Manila/ Zamboanga	176,144	2	0.67	1.50	WG&A	79.0

Source: 1998 Annual Traffic Reports of Shipping Companies submitted to the MARINA.

Appendix Table 2. Dominant/effective players per route per type of market, passenger traffic, secondary routes, 1998

Route	Passsengers Carried	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Routes with only 1 operator						
Batangas/ Romblon	6,760	1	1.00	1.00	Shipshape Ferry, Inc.	100.0
Baybay/ Maasin (Leyte/ Leyte)	44	1	1.00	1.00	Sulpicio Lines Inc	100.0
Cebu/ Bacolod*	2,998	1	1.00	1.00	Negros Navigation	100.0
Cebu/ Calbayog	12,571	1	1.00	1.00	FJP Lines	100.0
Cebu/ Catanduanes	37,056	1	1.00	1.00	Lapu Lapu Shipping Lines	100.0
Cebu/ Tacloban	40,933	1	1.00	1.00	Cebu Ferries Corp	100.0
Cebu/ Talibon	46,984	1	1.00	1.00	Age Shipping Lines	100.0
Cotabato/ Iloilo	9,318	1	1.00	1.00	Sulpicio Lines Inc	100.0
Cotabato/ Zamboanga	26,703	1	1.00	1.00	Sulpicio Lines Inc	100.0
Dapitan/ Tagbilaran	8,763	1	1.00	1.00	Negros Navigation	100.0
Dapitan/ Zamboanga	793	1	1.00	1.00	George and Peter Lines	100.0
Davao/ Surigao	3,182	1	1.00	1.00	Sulpicio Lines Inc	100.0
Dumaguete/ Leyte (Maasin)	68	1	1.00	1.00	Cokaliong Shipping Lines	100.0
Dumaguete/ Ozamis	10,995	1	1.00	1.00	Sulpicio Lines Inc	100.0
Iligan/ Ozamis	70	1	1.00	1.00	Negros Navigation	100.0
Iloilo/ Bacolod*	1,274,943	1	1.00	1.00	Negros Navigation	100.0
Iloilo/ Ozamis	6,635	1	1.00	1.00	Negros Navigation	100.0
Manila/ Coron	4,538	1	1.00	1.00	San Nicolas Lines Inc.	100.0
Manila/ Leyte (Baybay/ Maasin)	8,018	1	1.00	1.00	Sulpicio Lines Inc	100.0
Manila/ Mindoro (Tilik)	7,217	1	1.00	1.00	San Nicolas Lines Inc.	100.0
Manila/ Tacloban	46,940	1	1.00	1.00	WG&A Philippines	100.0
Masbate/ Leyte (Baybay/ Maasin)	326	1	1.00	1.00	Sulpicio Lines	100.0
Masbate/ Surigao	805	1	1.00	1.00	Sulpicio Lines Inc	100.0
Palawan/ Tacloban	118	1	1.00	1.00	Cebu Ferries Corp	100.0
Surigao/ del Carmen	1,189	1	1.00	1.00	Rogelio Tan	100.0
Surigao/ Leyte (Baybay)	1,650	1	1.00	1.00	Sulpicio Lines Inc	100.0
Surigao/ Maasin	2,768	1	1.00	1.00	Sulpicio Lines Inc	100.0

Appendix Table 2. Continued

Route	Passsengers Carried	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Routes with at least 2 operators						
Routes with substantial competition						
Bohol (Ubay)/ Leyte (Maasin or Bato)	3,506	2	0.50	2.00	Concepcion Ang, Adelia Membreve	100.0
Cagayan de Oro/ Tacloban	987	2	0.56	1.78	Sulpicio Lines, Cebu Ferries Corp	100.0
Cebu/ Butuan*	298,773	2	0.51	1.96	Cebu Ferries Corp, Sulpicio Lines	100.0
Cebu/ Palompon	7,251	2	0.62	1.62	MY Lines Inc, San Juan Shipping Corp	100.0
Manila/ Roxas	256,116	2	0.54	1.84	WG&A, Negros Navigation	100.0
Manila/ Surigao	187,004	2	0.54	1.84	WG&A, Sulpicio Lines	100.0
Routes with only 1 effective competitor						
Bato/ Maasin (Leyte/Leyte)	11,614	2	0.89	1.12	Santos Cruz	94.3
Cebu/ Dipolog*	17,900	2	0.97	1.03	Cokaliong Shipping Lines	98.6
Cebu/ Ozamis	318,299	2	0.90	1.11	Cebu Ferries Corp	94.8
Cebu/ Surigao	60,083	2	0.72	1.39	Cokaliong Shipping Lines	83.2
Manila/ Bacolod*	571,605	2	1.00	1.00	Negros Navigation	99.9
Manila/ Cotabato	101,900	2	0.79	1.26	WG&A Philippines	88.4
Manila/ Ormoc	27,753	2	0.76	1.32	Sulpicio Lines	85.9
Routes with mild competition						
Cebu/ Dapitan	43,931	4	0.45	2.24	Negros Navigation, George and Peter Lines	94.4
Cebu/ Leyte	44,861	3	0.57	1.75	Southern Pacific Transport Corp	70.0
Cebu/ Ormoc	568,271	6	0.52	1.92	Phil Fast Ferry Corp, Cebu Ferries Corp	84.3
Dumaguete/ Dapitan	87,065	4	0.42	2.38	Negros Navigation, George and Peter Lines	80.8
Manila/ Ozamis	148,083	3	0.64	1.56	WG&A Philippines	78.2
Manila/ Palompon	45,169	2	0.66	1.51	WG&A Philippines	78.7

Source: 1998 Annual Traffic Reports of Shipping Companies submitted to the MARINA.

Appendix Table 3. Dominant/effective players per route per type of market, passenger traffic, tertiary routes, 1998

Route	Passsengers Carried	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Routes with only 1 operator						
Bacolod/ Bataan	589	1	1.00	1.00	Seaford Shipping Lines	100.0
Bacolod/ Cagayan de Oro	37,524	1	1.00	1.00	Negros Navigation	100.0
Bacolod/ Davao	1,332	1	1.00	1.00	Negros Navigation	100.0
Bacolod/ Estancia	3	1	1.00	1.00	Negros Navigation	100.0
Bacolod/ General Santos	1,514	1	1.00	1.00	Negros Navigation	100.0
Bacolod/ Legaspi	1,547	1	1.00	1.00	Negros Navigation	100.0
Bacolod/ Ozamis	467	1	1.00	1.00	Negros Navigation	100.0
Bacolod/ Palawan	14,709	1	1.00	1.00	Negros Navigation	100.0
Bacolod/ Zamboanga	2,385	1	1.00	1.00	Negros Navigation	100.0
Batangas (Tinglay)/ Batangas (Mabini)	3,400	1	1.00	1.00	Dionisio Albania	100.0
Baybay/ Calubian	35	1	1.00	1.00	Sulpicio Lines Inc	100.0
Baybay/ Kawit	440	1	1.00	1.00	Sofronio Bogtai	100.0
Baybay/ Moabog	250	1	1.00	1.00	Sofronio Bogtai	100.0
Baybay/ Monsirat	425	1	1.00	1.00	Sofronio Bogtai	100.0
Baybay/ San Juan	511	1	1.00	1.00	Sofronio Bogtai	100.0
Bogo/ Placer	10,176	1	1.00	1.00	Patrocinio Cuaca	100.0
Bogo/ Tabango	1,452	1	1.00	1.00	Tabango Express	100.0
Bogo/ Villaba	18,421	1	1.00	1.00	Patrocinio Cuaca	100.0
Buenavista/ Iloilo	584	1	1.00	1.00	Elizabeth Carino	100.0
Butuan/ Cagayan de Oro	125	1	1.00	1.00	Sulpicio Lines Inc	100.0
Cadiz/ Bantayan	6,533	1	1.00	1.00	Sto. Nino Ferry Boat Services	100.0
Calbayog / Guinbarocan	550	1	1.00	1.00	Arturo Olasiman	100.0
Calbayog/ Labangbaybay	550	1	1.00	1.00	Arturo Olasiman	100.0
Calbayog/ Maripipi	1,950	1	1.00	1.00	Cesar Sitjar	100.0
Calbayog/ Tagapulaan	606	1	1.00	1.00	Teresita Koga	100.0
Calubian/ Maasin	5	1	1.00	1.00	Sulpicio Lines Inc	100.0
Camiguin/ Ormoc	2,844	1	1.00	1.00	Philippine Fast Ferry	100.0
Carbon/ Inabangan	9,841	1	1.00	1.00	Gomez Brothers Shipping Lines	100.0
Catbalogan/ Borongan	1,992	1	1.00	1.00	Margarito Tan	100.0
Catbalogan/ Brgy Saugan	7,948	1	1.00	1.00	Dionisio Montalban	100.0
Catbalogan/ Buenavista	1,730	1	1.00	1.00	Iluminado Dacallos	100.0
Catbalogan/ Canhawan Gote	49	1	1.00	1.00	Agustine Romano	100.0
Catbalogan/ Daram	12,480	1	1.00	1.00	Manuel Estrada	100.0
Catbalogan/ Guintarean	5,640	1	1.00	1.00	Emilio Morate	100.0
Catbalogan/ Haplaan	430	1	1.00	1.00	Florencio Apacible	100.0
Catbalogan/ Jocopon	3,036	1	1.00	1.00	Florencio Apacible	100.0
Catbalogan/ San Rogue	4,899	1	1.00	1.00	Reynaldo Cajefe Jr	100.0
Catbalogan/ Sitio Bitoon	50	1	1.00	1.00	Agustine Romano	100.0
Catbalogan/ Tarangnan	294	1	1.00	1.00	Antonio Vencio	100.0
Catbalogan/ Villareal	3,668	1	1.00	1.00	Avelino Arraz	100.0

Appendix Table 3. Continued

Route	Passsengers Carried	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Cebu/ Camotes	5,302	1	1.00	1.00	Palacio Shipping	100.0
Cebu/ Dawahon	2,604	1	1.00	1.00	Concepcion Ang	100.0
Cebu/ Hiligaynon	31,696	1	1.00	1.00	Roble Shipping	100.0
Cebu/ Jetafe	23,901	1	1.00	1.00	Carmelo Simolde	100.0
Cebu/ Lapu-lapu	2,933,142	1	1.00	1.00	Metro Ferry Cebu	100.0
Cebu/ Larena	3,855	1	1.00	1.00	Palacio Shipping Inc	100.0
Cebu/ Lazi	167	1	1.00	1.00	George and Peter Lines	100.0
Cebu/ Sta Fe	12,949	1	1.00	1.00	FJP Lines	100.0
Cogon/ Sta Ana	22,501	1	1.00	1.00	Roger Bandao	100.0
Cuyo/ El Nido	20	1	1.00	1.00	Virgilio Arbolado	100.0
Cuyo/ San Vicente	55	1	1.00	1.00	Virgilio Arbolado	100.0
Dadiangas/ Iloilo	9,211	1	1.00	1.00	Sulpicio Lines Inc	100.0
Danao/ Camotes	18,680	1	1.00	1.00	Carlito Latonio	100.0
Danao/ Kawit	455	1	1.00	1.00	Sofronio Bogtai	100.0
Danao/ Moabog	569	1	1.00	1.00	Sofronio Bogtai	100.0
Danao/ Naval	94	1	1.00	1.00	Cesar Sitjar	100.0
Dapitan/ Lazi	543	1	1.00	1.00	George and Peter Lines	100.0
Davao/ Dadiangas	34	1	1.00	1.00	Sulpicio Lines Inc	100.0
Dipolog/ Iligan	534	1	1.00	1.00	Sulpicio Lines Inc	100.0
Dipolog/ Tagbilaran	12,065	1	1.00	1.00	Sulpicio Lines Inc	100.0
Doong / Hagnaya	231	1	1.00	1.00	Gaudencio Baruc	100.0
Doong/ Vito	130	1	1.00	1.00	Gaudencio Baruc	100.0
Dumaguete/ Estancia	3	1	1.00	1.00	Negros Navigation	100.0
Gravahan/ Pag-asa	238,416	1	1.00	1.00	German Gutierrez	100.0
Guimaras/ Pulupandan	600	1	1.00	1.00	Teresita Gananan	100.0
Guimaras/ Roxas City	204	1	1.00	1.00	Nomn Novyar	100.0
Hilutungan/ Boyong	3	1	1.00	1.00	Tripple "S" Divers Services	100.0
Hilutungan/ Shangrila	103	1	1.00	1.00	Tripple "S" Divers Services	100.0
Iligan/ Bacolod	725	1	1.00	1.00	Negros Navigation	100.0
Iligan/ Lazi	2,919	1	1.00	1.00	George and Peter Lines	100.0
Iligan/ Ormoc	189	1	1.00	1.00	Sulpicio Lines Inc	100.0
Iloilo/ Cagayan de Oro	52,247	1	1.00	1.00	Negros Navigation	100.0
Iloilo/ Zambales	6,635	1	1.00	1.00	Negros Navigation	100.0
Jagna/ Nasipit	1,042	1	1.00	1.00	Sulpicio Lines Inc	100.0
Kalusuan/ Boyong	15	1	1.00	1.00	Tripple "S" Divers Services	100.0
Kalusuan/ Shang rila	155	1	1.00	1.00	Tripple "S" Divers Services	100.0
Lapinig,Garcia/ Bohol (Ubay)	5,268	1	1.00	1.00	M/ V Intan	100.0
Limasawa/ P. Burgos	10,968	1	1.00	1.00	Zenaida Petracorta	100.0
Mactan/ Dumilon	572	1	1.00	1.00	Tristar Sea Ventures Inc	100.0
Madredejos/ Kawit	4,731	1	1.00	1.00	Saturnino Atienza	100.0
Magalona/ Iloilo	3,055	1	1.00	1.00	Antonio Mogasa	100.0
Mandaue/ Bohol	5,174	1	1.00	1.00	Casiano Obligado, Jr	100.0

Appendix Table 3. Continued

Route	Passsengers Carried	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Manila/ Butuan	22,026	1	1.00	1.00	Sulpicio Lines Inc	100.0
Manila/ Calubian	11,813	1	1.00	1.00	Sulpicio Lines Inc	100.0
Manila/ Corregidor	25,235	1	1.00	1.00	Sun Cruises	100.0
Manila/ Dumaguit	43,567	1	1.00	1.00	WG&A Philippines	100.0
Manila/ El Nido- Liminangcong	1,557	1	1.00	1.00	San Nicolas Lines Inc.	100.0
Manila/ Zambales	6,460	1	1.00	1.00	Negros Navigation	100.0
Margos/ Malangas	4,041	1	1.00	1.00	Ever Lines	100.0
Margos/ Subanipa	3,328	1	1.00	1.00	Ever Lines	100.0
Margos/ Talusan	1,495	1	1.00	1.00	Ever Lines	100.0
Masbate/ Calubian	833	1	1.00	1.00	Sulpicio Lines Inc	100.0
Masbate/ Maya	6,415	1	1.00	1.00	Arturo Susas	100.0
Masbate/ Ormoc	3,123	1	1.00	1.00	Sulpicio Lines Inc	100.0
Maya/ Logon	6,023	1	1.00	1.00	Edison Dalag	100.0
Mindoro/ Burunga	2,630	1	1.00	1.00	San Nicolas Lines Inc.	100.0
Mindoro/ Libertad	7,173	1	1.00	1.00	San Nicolas Lines Inc.	100.0
Mindoro/ Semerara	8,136	1	1.00	1.00	San Nicolas Lines Inc.	100.0
Naval/ Bato	2,260	1	1.00	1.00	Cesar Sitjar	100.0
Naval/ Binalayan	107	1	1.00	1.00	Teodulo Lapure	100.0
Naval/ Burabod	101	1	1.00	1.00	Teodulo Lapure	100.0
Naval/ Calbani	84	1	1.00	1.00	Teodulo Lapure	100.0
Naval/ Canduhao	2,110	1	1.00	1.00	Cesar Sitjar	100.0
Naval/ Casibang	76	1	1.00	1.00	Teodulo Lapure	100.0
Naval/ Hagonoy	165	1	1.00	1.00	Teodulo Lapure	100.0
Naval/ Maripipi	168	1	1.00	1.00	Teodulo Lapure	100.0
Naval/ Trabugan	91	1	1.00	1.00	Teodulo Lapure	100.0
Naval/ Ulog	73	1	1.00	1.00	Teodulo Lapure	100.0
Naval/ Viga	63	1	1.00	1.00	Teodulo Lapure	100.0
Odiongan/ Oangay	3,666	1	1.00	1.00	Manuel Perez	100.0
Ormoc/ Camotes (Pilar)	19,240	1	1.00	1.00	Antonieto Pedericos	100.0
Ormoc/ Dapdap	1,228	1	1.00	1.00	Sofronio Bogtai	100.0
Ormoc/ Kawit	1,050	1	1.00	1.00	Sofronio Bogtai	100.0
Ormoc/ Lanao	1,035	1	1.00	1.00	Sofronio Bogtai	100.0
Ormoc/ Moabog	990	1	1.00	1.00	Sofronio Bogtai	100.0
Ormoc/ Monsirat	733	1	1.00	1.00	Sofronio Bogtai	100.0
Ozamis/ Kolambugan	36,279	1	1.00	1.00	M/V Lilly/ Dona Antonina/ Dona Anita	100.0
Ozamis/ Mukas	491,114	1	1.00	1.00	Daima Shipping Corp	100.0
Ozamis/ Tubod	35,741	1	1.00	1.00	M/V Lilly/ Dona Antonina/ Dona Anita	100.0
Paradise/ Insular	30,800	1	1.00	1.00	Armando Salva	100.0
Perez/ Antimonan	5,180	1	1.00	1.00	Eutiquio Caringal	100.0
Romblon/ Lucena	42	1	1.00	1.00	Rolando Liwanag	100.0
Romblon/ San Agustin	600	1	1.00	1.00	Jaime Macaya	100.0
Sagasa/ Alicia	518	1	1.00	1.00	Magnolia Shipping Corp	100.0

Appendix Table 3. Continued

Route	Passsengers Carried	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Samal/ Caliclic	14,464	1	1.00	1.00	Analita Richa	100.0
Samal/ Davao City	22,311	1	1.00	1.00	Myrna Espinosa	100.0
Samar/ Mandaue	392	1	1.00	1.00	Juana Lopez	100.0
San Carlos/ Estancia	96	1	1.00	1.00	Negros Navigation	100.0
San Carlos/ Toledo	128,321	1	1.00	1.00	Danilo Lines	100.0
San Jose/ Antique	6,416	1	1.00	1.00	San Nicolas Lines Inc.	100.0
Sibuyan/ Roxas	365	1	1.00	1.00	Robinson Royo	100.0
Sta Ana/ Isla Rita	2,600	1	1.00	1.00	Timoteo Batton	100.0
Sta Ana/ Pearl Farm	692	1	1.00	1.00	Timoteo Batton	100.0
Sta Cruz/ Tucanga	12,784	1	1.00	1.00	Celeste Tenperateba	100.0
Sta Rosa/ Ang-asil	50,888	1	1.00	1.00	Santa Rosa Sea Trans, Inc.	100.0
Sta Rosa/ Boyong	16	1	1.00	1.00	Tripple "S" Divers Services	100.0
Sta Rosa/ CMMC	3	1	1.00	1.00	Tripple "S" Divers Services	100.0
Sta Rosa/ Shangrila	18	1	1.00	1.00	Tripple "S" Divers Services	100.0
Sto Tomas/Talaga	9,800	1	1.00	1.00	Jose Castro	100.0
Subanipa/ Malangas	401	1	1.00	1.00	Magnolia Shipping Corp	100.0
Sulpa/ Boyong	168	1	1.00	1.00	Tripple "S" Divers Services	100.0
Sulpa/ CMMC	59	1	1.00	1.00	Tripple "S" Divers Services	100.0
Sulpa/ Shang rila	129	1	1.00	1.00	Tripple "S" Divers Services	100.0
Surigao/ Cagdianao	1,193	1	1.00	1.00	Honesto Lipao	100.0
Surigao/ Calubian	178	1	1.00	1.00	Sulpicio Lines Inc	100.0
Surigao/ Dapa	33,750	1	1.00	1.00	BCT Shipping Lines	100.0
Surigao/ Pinut-an	4,178	1	1.00	1.00	Vicente Mejia	100.0
Surigao/ Quezon (Albor)	470	1	1.00	1.00	Genara Malbacias	100.0
Tab-oc/ Bagacay	385	1	1.00	1.00	Leonardo Dauhog	100.0
Tab-oc/ Hingatungan	360	1	1.00	1.00	Leonardo Dauhog	100.0
Tab-oc/ San Francisco	487	1	1.00	1.00	Pedro Felizarta	100.0
Tab-oc/ Tib-o	314	1	1.00	1.00	Pedro Felizarta	100.0
Tacloban/ Balangiga	1,838	1	1.00	1.00	Joedina Baleos-Gumagay	100.0
Tacloban/ Giporlos	1,515	1	1.00	1.00	Romulo Alvarina	100.0
Talisay/ Tampi	19,971	1	1.00	1.00	ABC Liner & Ferry Boat Services	100.0
Talusan/ Alicia	586	1	1.00	1.00	Magnolia Shipping Corp	100.0
Tangil, Dhug/ Negros	73,409	1	1.00	1.00	P.S. Rodriguez Ferry Service	100.0
Tangil/ Dumanjug	51,254	1	1.00	1.00	Jeffrey Pages	100.0
Zamboanga/ Alicia	1,876	1	1.00	1.00	Magnolia Shipping Corp	100.0
Zamboanga/ Basilan	134,191	1	1.00	1.00	Aleson Shipping Lines	100.0
Zamboanga/ Dipolog	41	1	1.00	1.00	Company A*	100.0
Zamboanga/ Pagadian	17,847	1	1.00	1.00	Sampaguita Shipping Corp.	100.0
Zamboanga/ Sandakan	6,285	1	1.00	1.00	Sampaguita Shipping Corp.	100.0
Zamboanga/ Siocon	11,845	1	1.00	1.00	Sampaguita Shipping Corp.	100.0
Zamboanga/ Sirawai	10,803	1	1.00	1.00	Sampaguita Shipping Corp.	100.0
Zamboanga/ Talusan	3,540	1	1.00	1.00	Magnolia Shipping Corp.	100.0

Appendix Table 3. Continued

Route	Passsengers Carried	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Routes with at least 2 operators						
Routes with substantial competition						
Bataan/ Dumanguit	60,083	2	0.54	1.85	Almyre Cortez, Santiago Regalado	100.0
Butuan/ Jagna	137,069	2	0.50	1.98	Sulpicio Lines, Cebu Ferries Corp	100.0
Cebu/ Naval	11,026	2	0.55	1.83	San Juan Shipping Lines, MY Lines	100.0
Cuyo/ Iloilo	125	2	0.54	1.84	Jose Pedida, Virgilio Arbolado	100.0
Cuyo/ Roxas	105	2	0.50	1.99	Jose Pedida, Virgilio Arbolado	100.0
Jolo/ Sitangkai	1,593	2	0.50	1.99	Magnolia Shipping Corp., Sampaguita Shipping Corp	100.0
Magallanes/ Butuan	1,090	2	0.52	1.93	Rodolfo Monilla, Juanito Tiu	100.0
Masbate/ Iloilo	13,732	2	0.54	1.86	Miller Santiago, Michael Jude Placencia	100.0
Masbate/ Roxas	15,400	2	0.53	1.90	Isidro Refil Jr, Michael Jude Placencia	100.0
Maya/ San Isidro	28,057	2	0.50	1.99	Cipriano Buante, Arturo Susas	100.0
Romblon/ Roxas	782	2	0.54	1.85	Glifford Roy, Eladio Olit	100.0
Sagasa/ Talusan	3,686	2	0.57	1.76	Ever Lines, Magnolia Shipping Corp	100.0
Siasi/ Sitangkai	1,762	2	0.50	2.00	Magnolia Shipping Corp., Sampaguita Shipping Corp	100.0
Zamboanga/ Sagasa	5,156	2	0.56	1.78	Magnolia Shipping Corp., Ever Lines	100.0
Zamboanga/ Sitangkai	2,455	2	0.51	1.96	Magnolia Shipping Corp., Sampaguita Shipping Corp	100.0
Zamboanga/ Subanipa	12,935	2	0.54	1.85	Magnolia Shipping Corp., Ever Lines	100.0
Paradise Beach/ Caltex Sosa	54,058	5	0.21	4.76	Cesar Radjab, Candido Balunos, Zosimo Barsarsa, Paquito Osake	100.0
Routes with only one (1) effective competitor						
Batangas/ Mindoro (Calapan)	1,341,506	2	1.00	1.00	Phil Fast Ferry Corp	99.9
Benoni/ Balingoan	229,947	2	0.86	1.16	RP Tamula and Sons	92.6
Cebu/ Camiguin	197,635	2	0.83	1.21	Cebu Ferries Corp	90.4
Cebu/ Iligan	1,582,824	2	0.94	1.07	Cebu Ferries Corp	96.8
Sta Ana/ Ekron	114,276	2	0.93	1.08	Felicisima Villanueva	96.2
Sta Rosa (Lapulapu)/ Dap-dap (Lapulapu)	161,792	2	0.80	1.24	Manolito Ompad	89.0
Surigao/ Basilica	14,838	2	0.89	1.13	Lina Riega	94.0
Zamboanga/ Malangas	8,392	2	0.81	1.23	Ever Lines	89.6
Dumaguete/ Larena	62,788	3	0.80	1.25	DIMC Shipping Inc	89.1
Zamboanga/ Tawi- tawi	930	3	0.85	1.18	Zenaida Esperanza	91.9
Routes with mild competition						
Babak/ Sasa	861,367	9	0.15	6.52	Gaspar Valera, Bords Transport Corp	46.2
Bongao/ Sitangkai	8,127	3	0.47	2.13	Hadjio Ahmad, Magnolia Ship. Corp.	36.5

Appendix Table 3. Continued

Route	Passsengers Carried	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Caticlan/ Boracay	97,275	33	0.07	15.26	Dioneto Villanueva, Charlito Villanueva, Fulgencio Aron, Jerly Cooper, Avelino del Rosario, Pablo Villanueva, Dante Elisio, Jorge Pelayo, Antonio Alcazaren, Aguinaldo dela Torre, Bobby Cahilig, Rolando Tapuz, Reynaldo Bantang, Gertacio Gumboc, Nellie Tamboon	84.3
Guimaras/ Iloilo	146,576	21	0.07	15.31	Maria Balena, Santiago Siloterio, Leonardo Tarrarona, Danny Guillermo, Nerissa Pelingon, Agripino Alcoran, Ed Gando, Visitacion Galotera, Romeo Tigolo, Ed Colmenares, Nelia Camon, Bellardo Espinosa, Ernesto Cedalanga, Fernando Espinosa, Ely Canja	81.6
Guimaras/ Negros Occidental	23,434	2	0.65	1.54	Neva Quezon	77.2
Iloilo (Estancia)/ Iloilo (Gigante)	2,717	3	0.71	1.41	Romeo Derio	82.5
Jolo/ Bongao	8,371	3	0.44	2.26	Sampaguita Shipping Corp	59.7
Jolo/ Siasi	7,967	3	0.43	2.31	Hadjio Ahmad	59.0
Liloan/ Sibulan	7,952	4	0.51	1.97	Max Baat, Matilde Baat	80.3
Palawan/ Mindoro (San Jose)	2,310	2	0.69	1.46	Franco Mabigat	80.5
Penaplata/ Sta Ana	194,507	7	0.16	6.26	Erlinda Atianzar, Andrea Vargas	39.5
Siasi/ Bongao	6,883	3	0.48	2.08	Hadjio Ahmad, Sampaguita Shipping Corp	83.3
Siquijor/ Dumaguete	50,562	6	0.39	2.56	Lucita Balanay	58.5
Sta Ana/ Kapution	65,883	3	0.69	1.45	Martino Palacio	81.1
Sta Ana/ Samal	38,652	5	0.40	2.50	Rogelio Martines	56.3
Sta Ana/ Sta Cruz	75,487	4	0.34	2.95	Jesus Parilla, Mario Reta	79.2
Sta Cruz/ Quezon (Catanauan/ Gen Luna)	4,322	5	0.24	4.11	Tomas Alvares, Gregorio Pernia	59.8
Zamboanga/ Bongao	9,585	3	0.45	2.22	Sampaguita Shipping Corp	61.2
Zamboanga/ Jolo	33,318	4	0.49	2.06	Sampaguita Shipping Corp	66.5
Zamboanga/ Margosatubig	12,930	2	0.63	1.59	Ever Lines	82.9
Zamboanga/ Siasi	4,647	2	0.64	1.56	Magnolia Shipping Corp	76.5

Source: 1998 Annual Traffic Reports of Shipping Companies submitted to the MARINA.

Appendix Table 4. Dominant/effective players per route per type of market, cargo revenue, primary routes, 1998

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Routes with only 1 operator						
Cagayan de Oro/Iligan/Tagbilaran	72,436.80	1	1.00	1.00	Sampaguita Shipping Corp.	100.0
Cebu/ Cotabato/ Dumaguete	18,496.00	1	1.00	1.00	Sun Lines	100.0
Cebu/ Cotobato/Gen. Santos	14,114.50	1	1.00	1.00	Magnolia Shipping Corporation	100.0
Cebu/ Dadiangas	25,933,846.19	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Cebu/ Dumaguete/ Gen Santos	53,297.10	1	1.00	1.00	Sun Lines	100.0
Cebu/ Estancia	22,325.00	1	1.00	1.00	Negros Navigation Company	100.0
Cebu/ Iligan/Cagayan de Oro	67,992.30	1	1.00	1.00	Sampaguita Shipping Corp.	100.0
Cebu/ Iligan/Iloilo	103,600.00	1	1.00	1.00	Ocean Express Shipping Corp	100.0
Cebu/ Iloilo/ Palawan (Brookes)	132,700.00	1	1.00	1.00	Ocean Express Shipping Corp	100.0
Cebu/ Nasipit	641,884.59	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Cebu/ Tubigon	134,851.50	1	1.00	1.00	Arrel Shipping	100.0
Dadiangas/ Zamboanga	21,520,435.14	1	1.00	1.00	Sulpicio Lines Inc.	100.0
General Santos/ Cebu/ Dumaguete	98,711.50	1	1.00	1.00	Magnolia Shipping Corporation	100.0
Iligan/ Cagayan	1,453.38	1	1.00	1.00	Cebu Ferries Corporation	100.0
Iloilo (Estancia)/ Zamboanga	7,229,858.05	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Iloilo/ Puerto Princesa/ Palawan	24,448.44	1	1.00	1.00	William, Gothong & Aboitiz, Inc.	100.0
Manila/ Batangas	4,641,173.87	1	1.00	1.00	William Michael Shipping Corp.	100.0
Manila/ Cebu/ Iligan	110,372.85	1	1.00	1.00	William Michael Shipping Corp.	100.0
Manila/ Cebu/ Iligan/ Dumaguete	288,072.64	1	1.00	1.00	William Michael Shipping Corp.	100.0
Manila/ Dadiangas	54,455,246.17	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Manila/ General Santos/Cebu	114,543.60	1	1.00	1.00	Magnolia Shipping Corporation	100.0
Manila/ Nasipit	3,986,782.48	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Manila/ Puerto Princesa	49,564,716.59	1	1.00	1.00	William, Gothong & Aboitiz, Inc.	100.0
Palawan/ Davao	776,404.12	1	1.00	1.00	William, Gothong & Aboitiz, Inc.	100.0
Tagbilaran/Iligan/Cebu	147,424.40	1	1.00	1.00	Sampaguita Shipping Corp.	100.0
Routes with at least 2 operators						
Routes with substantial competition						
Batangas/ Puerto Princesa	4,702,649.71	2	0.59	1.69	Via Marine Corporation, Terban Marine Corp	100.0
Batangas/Masbate/Puerto Princesa	2,679,924.29	2	0.55	1.81	Terban Marines Corp, Via Marine Corp	100.0
Batangas/Pasacao/Puerto Princesa	1,477,070.66	2	0.51	1.97	Terban Marines Corp, Via Marine Corp	100.0
Cagayan/ Jagna	822,316.86	2	0.54	1.84	Cebu Ferries Corp, Sulpicio Lines	100.0
Cebu/ Jagna	2,031,495.45	3	0.33	2.99	Sulpicio Lines, Lite Shipping Corp, Cebu Ferries Corp	100.0
Cebu/ Zamboanga/Gen Santos	188,046.90	2	0.60	1.66	Sun Lines, Magnolia Shipping Lines	100.0
Manila/ Dipolog	23,882,824.87	2	0.53	1.90	Sulpicio Lines, WG&A	100.0

Appendix Table 4. Continued

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Manila/ Estancia	8,601,481.06	2	0.56	1.78	Sulpicio Lines, Negros Navigation	100.0
Manila/ Masbate	21,574,856.26	2	0.54	1.84	Sulpicio Lines, WG&A	100.0
Manila/ San Carlos	1,581,070.00	2	0.50	1.99	Negros Navigation, Seaford Shipping Lines	100.0
Routes with only 1 effective competitor						
Cebu/ Masbate	1,252,909.07	2	0.89	1.13	Sulpicio Lines	94.0
Cebu/ Puerto Princesa	1,003,866.20	3	0.73	1.38	Teng Tick Hua	84.0
Cebu/ Tagbilaran	66,776,308.80	9	0.80	1.26	Phil Fast Ferry Corp	89.0
Davao/ Zamboanga	21,921,461.37	6	0.77	1.30	WG&A Philippines Inc	87.0
Dumaguete/ Zamboanga	4,541,445.21	3	0.89	1.12	George and Peter Lines	94.0
Iloilo/ Palawan	2,633,327.87	2	0.99	1.01	Negros Navigation	99.0
Palawan/ Cagayan	25,320.49	2	0.96	1.05	Sulpicio Lines	98.0
Routes with mild competition						
Cagayan/ Tagbilaran	1,124,401.58	3	0.54	1.84	Cebu Ferries Corp, Triton Shipping Corp	84.0
Cebu/ Bohol	939,943.65	8	0.28	3.59	Ormoc Enterprises, Lite Shipping Corp, Nelson Uy, Manolito Abapo	87.0
Cebu/ Cagayan	75,464,446.24	10	0.46	2.19	Cebu Ferries Corp, Sulpicio Lines	91.0
Cebu/ Davao	154,237,641.74	9	0.54	1.85	Sulpicio Lines, Lorenzo Shipping Corp	84.0
Cebu/ Dumaguete	41,199,217.31	15	0.56	1.78	Phil Fast Ferry Corp, George and Peter Lines	84.0 82.0
Cebu/ General Santos	28,219,026.84	9	0.37	2.67	Cebu Ferries Corp, Sulpicio Lines, WG&A	81.0
Cebu/ Iloilo	11,164,007.84	15	0.27	3.68	Negros Navigation, Cokaliong Shipping, WG&A,Lorenzo Shipping	94.0 2.2
Cebu/ Palawan	3,773,296.70	5	0.31	3.19	Victan Transport Services, Negros Navigation, Cebu Ferries Corp	80.0
Cebu/ Zamboanga	36,241,689.67	12	0.39	2.56	George and Peter Lines, Sulpicio Lines, Lite Shipping Corp	94.2
Davao/ General Santos	1,060,800.89	4	0.67	1.49	WG&A Philippines Inc	85.7
Dumaguete/ Tagbilaran	1,464,389.78	4	0.39	2.57	Negros Navigation, Phil Fast Ferry Corp, Philip Go	95.6
General Santos/ Zamboanga	3,201,282.49	7	0.34	2.94	Negros Navigation, WG&A, Galactic Shipping	98.0
Iligan/ Tagbilaran	3,067,418.09	4	0.58	1.71	Sulpicio Lines, WG&A	95.1
Iloilo/ Davao	10,225,379.99	3	0.48	2.08	WG&A, Negros Navigation	76.4
Iloilo/ General Santos	8,357,274.35	4	0.46	2.16	Negros Navigation, WG&A	90.6
Iloilo/ Iligan	3,387,507.92	9	0.43	2.33	Negros Navigation, Hosanna Shipping	94.8
Manila/ Bacolod	347,282,893.07	5	0.50	2.02	Negros Navigation, WG&A	90.6

Appendix Table 4. Continued

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Manila/ Cagayan	711,473,013.28	6	0.26	3.82	WG&A, Sulpicio Lines, Solid Shipping Lines, Lorenzo Shipping Corp	94.8
Manila/ Cebu	1,004,747,524.76	4	0.38	2.61	WG&A, Sulpicio Lines	86.0
Manila/ Davao	678,986,652.52	4	0.32	3.17	WG&A, Sulpicio Lines	69.5
Manila/ Dumaguete	428,166,781.64	5	0.69	1.45	Solid Shipping Corp	83.0
Manila/ General Santos	518,799,626.22	6	0.37	2.73	WG&A, Solid Shipping Lines, Lorenzo Shipping Corp	95.7
Manila/ Iligan	87,277,223.44	4	0.54	1.86	WG&A, Sulpicio Lines	88.6
Manila/ Iloilo	40,950.00	7	0.28	3.62	WG&A, Negros Navigation, Lorenzo Shipping Corp, Sulpicio Lines	99.8
Manila/ Palawan	127,482,600.03	5	0.65	1.55	Negros Navigation, WG&A	59.0
Manila/ Tagbilaran	63,169,311.82	3	0.46	2.17	WG&A, Negros Navigation	85.3
Manila/ Zamboanga	411,264,594.59	4	0.34	2.93	Sulpicio Lines, WG&A, Lorenzo Shipping Corp	98.7

Source: 1998 Annual Traffic Reports of Shipping Companies submitted to the MARINA.

Appendix Table 5. Dominant/effective players per route per type of market, cargo revenue, secondary routes, 1998

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Routes with only 1 operator						
Batangas/ Romblon	78,350.00	1	1.00	1.00	Shipshape Ferry	100.0
Cotabato/ Estancia	22,434.02	1	1.00	1.00	Sulpicio Lines	100.0
Dapitan/ Tagbilaran	147,632.51	1	1.00	1.00	Triton Shipping Corp	100.0
Dapitan/ Zamboanga	627,914.64	1	1.00	1.00	George and Peter Lines	100.0
Dumaguete/ Maasin	22,104.30	1	1.00	1.00	Cokaliong Shipping Lines	100.0
Manila/ Baybay	866,733.60	1	1.00	1.00	Sulpicio Lines	100.0
Manila/ Cebu/ Bacolod	121,180.00	1	1.00	1.00	Ocean Express Shipping Corp	100.0
Manila/ Coron	16,351,889.42	1	1.00	1.00	San Nicolas Lines	100.0
Manila/ Maasin	675,801.52	1	1.00	1.00	Sulpicio Lines	100.0
Manila/ Palompon	4,460,893.86	1	1.00	1.00	Sulpicio Lines	100.0
Manila/ Tilik	6,032,910.14	1	1.00	1.00	San Nicolas Lines	100.0
Masbate/ Baybay	5,313.57	1	1.00	1.00	Sulpicio Lines	100.0
Palawan/ Tacloban	6,249.09	1	1.00	1.00	Cebu Ferries Corp	100.0
Surigao/ Baybay	87,843.63	1	1.00	1.00	Sulpicio Lines	100.0
Surigao/ Masbate	2,698.01	1	1.00	1.00	Sulpicio Lines	100.0
Ubay/ Maasin (Leyte)	2,440.00	1	1.00	1.00	Adelia Membreve	100.0
Routes with at least 2 operators						
Routes with substantial competition						
Cebu/ Talibon	3,841,071.00	2	0.62	1.61	Age Shipping Lines, VG Shipping Lines	100.0
Manila/ Butuan	138,164,503.77	2	0.61	1.63	WG&A, Sulpicio Lines	100.0
Manila/ Cotabato	178,602,482.64	3	0.35	2.88	WG&A, Sulpicio Lines, Lorenzo Shipping Corp	100.0
Manila/ Roxas	51,427,590.30	2	0.51	1.94	Negros Navigation, WG&A	100.0
Manila/ Surigao	21,212,430.20	2	0.55	1.81	Sulpicio Lines, WG&A	100.0
Surigao/ Maasin	128,739.98	2	0.60	1.67	Water Jet Shipping Corp, Sulpicio Lines	100.0
Routes with only 1 effective competitor						
Cagayan/ Tacloban	3,091,078.38	3	0.88	1.14	Cebu Ferries Corporation	93.8
Cebu/ Calbayog	2,977,751.60	2	0.96	1.04	FJP Lines	95.7
Cebu/ Dapitan	6,634,164.37	3	0.80	1.26	George and Peter Lines	88.7
Cebu/ Ormoc	115,271,400.59	7	0.77	1.30	Phil Fast Ferry Corp	87.2
Cebu/ Ozamis	35,972,196.03	3	0.88	1.13	Cebu Ferries Corporation	93.8
Cebu/ Palompon	608,053.68	3	0.84	1.18	MY Lines Inc	91.7
Cebu/ Tacloban	56,340,849.08	9	0.95	1.05	Cebu Ferries Corporation	97.4
Dumaguete/ Ozamis	4,023,557.76	3	0.90	1.11	Sulpicio Lines Inc	94.6
Iloilo/ Ozamis	1,153,112.90	2	0.98	1.02	Negros Navigation	98.9

Appendix Table 5. Continued

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Routes with mild competition						
Bohol (Ubay)/ Leyte (Maasin or Bato)	253,013.00	3	0.62	1.61	Angelina Balansag, Santos Cruz	96.5
Cebu/ Bacolod	9,467,232.84	9	0.43	2.35	Negros Navigation, Lilygene Shipping Lines	81.0
Cebu/ Butuan	61,216,008.94	6	0.46	2.16	Cebu Ferries Corp, Sulpicio Lines	96.2
Cebu/ Dipolog	5,467,990.76	4	0.47	2.11	Cokaliong Lines, Sulpicio Lines	97.3
Cebu/ Surigao	9,075,612.38	8	0.53	1.90	Cokaliong Lines, Sulpicio Lines	92.5
Cotabato/ Zamboanga	8,216,667.17	4	0.46	2.15	WG&A, Sulpicio Lines	94.4
Davao/ Surigao	1,073,524.86	3	0.52	1.93	Hosanna Shipping, Mintrade Shipping Lines	92.4
Dumaguete/ Dapitan	2,073,705.07	2	0.68	1.47	George and Peter Lines	79.9
Iligan/ Ozamis	111,672.08	4	0.35	2.86	Teng Tick Hua, Magnolia Shipping Corp, WG&A	99.8
Iloilo/ Bacolod	21,608,455.42	10	0.28	3.59	Negros Navigation, West Visayas Shipping Co., WG&A	67.3
Iloilo/ Cotabato	8,800,336.99	3	0.39	2.58	WG&A, Sulpicio Lines, Lorenzo Shipping Corp	100.0
Manila/ Ormoc	27,828,093.48	3	0.50	2.01	WG&A Phil. Inc, Sulpicio Lines	99.7
Manila/ Ozamis	110,356,039.06	3	0.47	2.14	WG&A Phil. Inc, Negros Navigation	87.0
Manila/ Tacloban	110,425,202.20	3	0.50	2.00	WG&A Phil. Inc, Sulpicio Lines	99.8
Surigao/ del Carmen	8,162.00	2	0.65	1.55	Domingo Paredes	77.1

Source: 1998 Annual Traffic Reports of Shipping Companies submitted to the MARINA.

Appendix Table 6. Dominant/effective players per route per type of market, cargo revenue, tertiary routes, 1998

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Routes with only 1 operator						
Adecar/ Panabo	393,000.00	1	1.00	1.00	Timoteo Batton	100.0
Alicia (Guicam) / Mabuhay (Hulahula)	147,965.51	1	1.00	1.00	ZDS-ATOM FSA	100.0
Argao/ Loon	3,141,004.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Bacolod/ Bais	8,000.00	1	1.00	1.00	Conrado Geraldoy	100.0
Bacolod/ Bataan	80,406.00	1	1.00	1.00	Seaford Shipping Lines	100.0
Bacolod/ Butuan	31,605.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Bacolod/ Del Pan	206,896.20	1	1.00	1.00	William Michael Shipping Corp.	100.0
Bacolod/ Dipolog	30,000.00	1	1.00	1.00	V- Lines	100.0
Bacolod/ Dumaguete	186,474.38	1	1.00	1.00	Palacio Shipping Inc.	100.0
Bacolod/ Guimaras	143,500.00	1	1.00	1.00	Gerardo Gubo	100.0
Bacolod/ Hilongos	39,200.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Bacolod/ Languyan	351,231.00	1	1.00	1.00	Hadji Sab Tiri Jalali	100.0
Bacolod/ Legaspi	676.00	1	1.00	1.00	Negros Navigation Company	100.0
Bacolod/ Leyte (Isabel)	1,279,028.10	1	1.00	1.00	Palacio Shipping Inc.	100.0
Bacolod/ Mindoro (Sablayan)	82,272.00	1	1.00	1.00	Seaford Shipping Lines	100.0
Bacolod/ Palawan	1,555,951.00	1	1.00	1.00	Negros Navigation Company	100.0
Bacolod/ Pasacao	64,000.00	1	1.00	1.00	Rover Shipping Services	100.0
Bacolod/ Pasig	257,457.60	1	1.00	1.00	William Michael Shipping Corp.	100.0
Bacolod/ San Jose	20,000.00	1	1.00	1.00	Felicito Geraldoy	100.0
Bacolod/ Sta Catalina	27,000.00	1	1.00	1.00	V- Lines	100.0
Bacolod/ Toledo	240,000.00	1	1.00	1.00	Inter-Island Maritime Corporation	100.0
Bantayan/ Cadiz	340,711.00	1	1.00	1.00	Sto Nino Ferry Boat Services	100.0
Bantayan/ Roxas	20,000.00	1	1.00	1.00	Analyn Cordero	100.0
Batangas (PSPC) / Batangas (CTX)	365,891.10	1	1.00	1.00	Via Marine Corporation	100.0
Batangas (Shell)/ Batangas (Caltex)	487,132.43	1	1.00	1.00	Terban Marine Corporation	100.0
Batangas/ Amlan	108,775.00	1	1.00	1.00	William Michael Shipping Corp.	100.0
Batangas/ Cimlong (BTGS)	217,690.54	1	1.00	1.00	La Felicidad Marine Corporation	100.0
Batangas/ CTX Shell (Pandacan)	328,603.88	1	1.00	1.00	La Felicidad Marine Corporation	100.0
Batangas/ Currimao	8,499,865.64	1	1.00	1.00	Terban Marine Corporation	100.0
Batangas/ Dadiangas	2,475,452.22	1	1.00	1.00	Terban Marine Corporation	100.0
Batangas/ Ludo	586,708.47	1	1.00	1.00	La Felicidad Marine Corporation	100.0
Batangas/ Mabini	155,268.72	1	1.00	1.00	Terban Marine Corporation	100.0
Batangas/ Maricalum (Bulata)	534,714.98	1	1.00	1.00	La Felicidad Marine Corporation	100.0
Batangas/ Masbate	1,504,926.77	1	1.00	1.00	Via Marine Corporation	100.0
Batangas/ Naga (Apocemco)	1,920,341.98	1	1.00	1.00	La Felicidad Marine Corporation	100.0
Batangas/ Negros	249,602.50	1	1.00	1.00	William Michael Shipping Corp.	100.0
Batangas/ Pagbilao	416,787.27	1	1.00	1.00	Via Marine Corporation	100.0
Batangas/ Puerto Galera	416,787.27	1	1.00	1.00	Super Diamond Shipping Lines, Inc	100.0
Batangas/ Quezon (Mauban)	365,455.99	1	1.00	1.00	Via Marine Corporation	100.0
Batangas/ Sabah	712,116.80	1	1.00	1.00	Via Marine Corporation	100.0

Appendix Table 6. Continued

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Batangas/ Sabang	61,000.00	1	1.00	1.00	Cesar Datinguinod	100.0
Batangas/ Sta. Ana	628,485.82	1	1.00	1.00	Via Marine Corporation	100.0
Batangas/ Tolong	244,461.00	1	1.00	1.00	William Michael Shipping Corp.	100.0
Baybay/ Calubian	185.45	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Baybay/ Gingoog	135,386.25	1	1.00	1.00	Jones Carrier	100.0
Baybay/ Kawit	4,945.00	1	1.00	1.00	Sofronio Bogtai	100.0
Baybay/ Moabog	4,270.00	1	1.00	1.00	Sofronio Bogtai	100.0
Baybay/ Monserrat	3,400.00	1	1.00	1.00	Sofronio Bogtai	100.0
Baybay/ Pilar Camotes	79,969.00	1	1.00	1.00	Antonieto Pedericos	100.0
Baybay/ San Juan	3,530.00	1	1.00	1.00	Sofronio Bogtai	100.0
Bislig/ Davao/ Jolo	126,700.00	1	1.00	1.00	Ocean Express Shipping Corp	100.0
Bislig/ Picop	385,127.04	1	1.00	1.00	William Michael Shipping Corp.	100.0
Bohol (Pres. Carlos P. Garcia) / Mandaue (Looc)	4,110.00	1	1.00	1.00	Casiano Obligado Jr	100.0
Bohol (Ubay)/ Legaspi	98,700.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Bohol (Ubay)/ Sablayan	114,125.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Bohol (Ubay)/ San Fernando	92,825.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Bohol (Ubay)/ Talibon	14,400.00	1	1.00	1.00	Lite Shipping Corporation	100.0
BRC/ Navotas	4,264,791.11	1	1.00	1.00	Via Marine Corporation	100.0
BRC/ NPC CIP Cebu	522,824.01	1	1.00	1.00	Via Marine Corporation	100.0
BRC/ NPC Naga	538,490.55	1	1.00	1.00	Via Marine Corporation	100.0
BRC/ Pandacan	20,537,504.29	1	1.00	1.00	Via Marine Corporation	100.0
BRC/ Poro	1,227,651.78	1	1.00	1.00	Via Marine Corporation	100.0
BRC/ Rosario	5,632,988.58	1	1.00	1.00	Via Marine Corporation	100.0
Butuan/ Batangas	119,000.00	1	1.00	1.00	Ocean Express Shipping Corp	100.0
Butuan/ Bislig	249,600.00	1	1.00	1.00	Ocean Express Shipping Corp	100.0
Butuan/ Hilongos	40,792.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Butuan/ Hinunangan	26,000.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Butuan/ Ozamis	6,767.04	1	1.00	1.00	Cebu Ferries Corporation	100.0
Butuan/ San Fernando	595,000.00	1	1.00	1.00	Jones Carrier	100.0
Butuan/ Sorsogon	52,000.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Butuan/ Tacloban	142,503.27	1	1.00	1.00	Cebu Ferries Corporation	100.0
Butuan/ Zamboanga	26,000.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Cagayan de Oro/ Bantayan	244,581.46	1	1.00	1.00	Jones Carrier	100.0
Cagayan de Oro/ Catbalogan	24,310.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Cagayan de Oro/ Dadiangas	171,360.00	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Cagayan de Oro/ Mindoro	54,000.00	1	1.00	1.00	Ever Lines Inc.	100.0
Cagayan de Oro/ Mindoro (San Jose)	25,500.00	1	1.00	1.00	V- Lines	100.0
Cagayan de Oro/ Ozamis	64,000.00	1	1.00	1.00	Rover Shipping Services	100.0
Cagayan de Oro/ Pasacao	128,640.00	1	1.00	1.00	Ocean Express Shipping Corp	100.0
Cagayan de Oro/ Polloc	98,640.00	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Cagayan de Oro/ Pulupandan	238,800.00	1	1.00	1.00	Triton Shipping Corporation	100.0

Appendix Table 6. Continued

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Cagayan de Oro/ San Carlos	56,000.00	1	1.00	1.00	Ever Lines Inc.	100.0
Cagayan de Oro/ San Jose	52,000.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Cagayan de Oro/ Toledo	154,000.00	1	1.00	1.00	Inter-Island Maritime Corporation	100.0
Cagayan de Orocillo/ Puerto Prinsesa	57,000.00	1	1.00	1.00	Efren & Thelma Bungalso	100.0
Cagbalete/ Mauban	28,087.50	1	1.00	1.00	Oscar Gerdiano	100.0
Calbayog/ Guinabarocan	760.00	1	1.00	1.00	Arturo Olasiman	100.0
Calbayog/ Labangbaybay	37,207.00	1	1.00	1.00	Arturo Olasiman	100.0
Calbayog/ Mataloto	1,305.00	1	1.00	1.00	Arturo Olasiman	100.0
Calbayog/ Poblacion	480.00	1	1.00	1.00	Arturo Olasiman	100.0
Calbayog/ Tagpulaan	56,472.00	1	1.00	1.00	Teresita Koga	100.0
Carbon/ Inabangan	91,321.00	1	1.00	1.00	Gomez Brothers Shipping Lines	100.0
Catbalogan/ Borongan	123,910.00	1	1.00	1.00	Margarito Tan	100.0
Catbalogan/ Buenavista	9,799.00	1	1.00	1.00	Iluminado Dacullos	100.0
Catbalogan/ Buluan	41,248.00	1	1.00	1.00	Armando Sarayan	100.0
Catbalogan/ Canhawan	6,721.00	1	1.00	1.00	Agustin Romano	100.0
Catbalogan/ Cinco	24,041.00	1	1.00	1.00	Agustin Romano	100.0
Catbalogan/ Daram	23,040.00	1	1.00	1.00	Manuel Estrada	100.0
Catbalogan/ Guintarean	35,750.00	1	1.00	1.00	Emilio Morate	100.0
Catbalogan/ Jocopon	152,507.00	1	1.00	1.00	Florencio Apacible	100.0
Catbalogan/ Leyte (Isabel)	42,000.00	1	1.00	1.00	V- Lines	100.0
Catbalogan/ Mombon	33,100.00	1	1.00	1.00	Armando Sarayan	100.0
Catbalogan/ Rama	64,200.00	1	1.00	1.00	Armando Sarayan	100.0
Catbalogan/ Real/ Haplayan	5,405.00	1	1.00	1.00	Florencio Apacible	100.0
Catbalogan/ Samar	4,398.00	1	1.00	1.00	Agustin Romano	100.0
Catbalogan/ San Roque	82,020.00	1	1.00	1.00	Reynaldo Cajefe	100.0
Catbalogan/ Saugan	69,616.00	1	1.00	1.00	Dionisio Montalban	100.0
Catbalogan/ Sitio Bitoon	25,584.00	1	1.00	1.00	Agustin Romano	100.0
Catbalogan/ Sogod	26,000.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Catbalogan/ Tarangnan	3,320.00	1	1.00	1.00	Antonio Vencio	100.0
Cebu/ Bago	11,786.00	1	1.00	1.00	William Michael Shipping Corp.	100.0
Cebu/ Bantayan	50,000.00	1	1.00	1.00	Eastern Pacific Lines	100.0
Cebu/ Bantilan	1,733,688.67	1	1.00	1.00	Lapu-Lapu Shipping Lines	100.0
Cebu/ Bataan	185,000.00	1	1.00	1.00	Ocean Express Shipping Corp	100.0
Cebu/ Bauan	482,812.50	1	1.00	1.00	Aquilina Guro	100.0
Cebu/ Bilangbilangan East & West	427,018.35	1	1.00	1.00	Wilson C. Rabanos	100.0
Cebu/ Borongan	95,000.00	1	1.00	1.00	Lilygene Shipping Lines	100.0
Cebu/ Bulan	80,000.00	1	1.00	1.00	Torcuato Bahian	100.0
Cebu/ Cagayan de Orocillo	23,000.00	1	1.00	1.00	Efren & Thelma Bungalso	100.0
Cebu/ Calbayog/ Guiwan	350,000.00	1	1.00	1.00	Sultan Shipping	100.0
Cebu/ Camiguin	40,000.00	1	1.00	1.00	Torcuato Bahian	100.0
Cebu/ Cataingan	60,000.00	1	1.00	1.00	Torcuato Bahian	100.0
Cebu/ Cebu	365,123.60	1	1.00	1.00	Cebu Ferries Corporation	100.0

Appendix Table 6. Continued

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Cebu/ Cotabato/ Zamboanga	55,007.90	1	1.00	1.00	Sun Lines	100.0
Cebu/ Guiuan	60,000.00	1	1.00	1.00	Torcuato Bahian	100.0
Cebu/ Iloilo/ Legaspi	100,000.00	1	1.00	1.00	Sultan Shipping	100.0
Cebu/ Iloilo/ Pasacao	124,000.00	1	1.00	1.00	Sultan Shipping	100.0
Cebu/ Jetafe	80,129.00	1	1.00	1.00	Carmelo T. Simolde	100.0
Cebu/ Kiwalan	26,307.55	1	1.00	1.00	George and Peter Lines	100.0
Cebu/ Larena	1,536,462.12	1	1.00	1.00	Palacio Shipping Inc.	100.0
Cebu/ Lazi	638,884.67	1	1.00	1.00	George and Peter Lines	100.0
Cebu/ Liloy	65,000.00	1	1.00	1.00	Torcuato Bahian	100.0
Cebu/ Magallanes	178,960.50	1	1.00	1.00	Eduardo Jarque	100.0
Cebu/ Mindoro/Tagbilaran	80,000.00	1	1.00	1.00	Sultan Shipping	100.0
Cebu/ Nabilid	49,454.70	1	1.00	1.00	Eduardo Jarque	100.0
Cebu/ Oroquietta	258,631.10	1	1.00	1.00	George and Peter Lines	100.0
Cebu/ Polloc	425,729.40	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Cebu/ Pulupandan/ Ozamis	111,142.00	1	1.00	1.00	Teng Tick Hua	100.0
Cebu/ San Carlos	48,000.00	1	1.00	1.00	Ever Lines Inc.	100.0
Cebu/ San Fernando	84,000.00	1	1.00	1.00	Eduardo Jarque	100.0
Cebu/ San Jose	227,122.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Cebu/ Sta Fe	2,538,314.98	1	1.00	1.00	FJP Lines	100.0
Cotabato/ Dadiangas	1,994.15	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Cotabato/ Davao	67,192.74	1	1.00	1.00	Cebu Ferries Corporation	100.0
Cotabato/ Roxas City	40,000.00	1	1.00	1.00	Felicito Geraldoy	100.0
Cuyo/ El Nido	2,249.40	1	1.00	1.00	Virgilio Arbolado	100.0
Cuyo/ San Vicente	10,150.45	1	1.00	1.00	Virgilio Arbolado	100.0
Danao/ Consuelo, Camotes	231,340.00	1	1.00	1.00	Carlito Latonio	100.0
Danao/ Kawit	5,960.00	1	1.00	1.00	Sofronio Bogtai	100.0
Danao/ Moabog	6,045.00	1	1.00	1.00	Sofronio Bogtai	100.0
Dapitan/ Lazi	114,977.13	1	1.00	1.00	George and Peter Lines	100.0
Davao/ Basilan	49,880.00	1	1.00	1.00	Galactic Shipping Inc.	100.0
Davao/ Batangas	4,118,617.56	1	1.00	1.00	Terban Marine Corporation	100.0
Davao/ Bislig	111,275.00	1	1.00	1.00	Ocean Express Shipping Corp	100.0
Davao/ Bungao	186,792.33	1	1.00	1.00	Galactic Shipping Inc.	100.0
Davao/ Dadiangas	54,513.67	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Davao/ Dipolog	22,382.12	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Davao/ Escalante	92,334.83	1	1.00	1.00	Galactic Shipping Inc.	100.0
Davao/ Guimaras	3,000.00	1	1.00	1.00	Conrado Geraldoy	100.0
Davao/ Jolo	151,492.92	1	1.00	1.00	Galactic Shipping Inc.	100.0
Davao/ Legaspi	586,720.00	1	1.00	1.00	Hosanna Shipping	100.0
Davao/ Masbate	99,037.92	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Davao/ Nonoc	2,001,815.45	1	1.00	1.00	Terban Marine Corporation	100.0
Davao/ Ormoc	98,672.39	1	1.00	1.00	Cebu Ferries Corporation	100.0
Davao/ Ozamis	42,045.16	1	1.00	1.00	Cebu Ferries Corporation	100.0

Appendix Table 6. Continued

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Davao/ Pulupandan	90,000.00	1	1.00	1.00	Triton Shipping Corporation	100.0
Davao/ Tacloban	399,429.64	1	1.00	1.00	Cebu Ferries Corporation	100.0
Davao/ Tagbilaran	10,057.93	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Dipolog/ Dumaguete/ Cebu	393,766.24	1	1.00	1.00	William Michael Shipping Corp.	100.0
Dipolog/ Gingoog	234,651.00	1	1.00	1.00	Jones Carrier	100.0
Dipolog/ Liloan	24,310.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Dipolog/ Ozamis	26,000.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Dipolog/ San Jose	26,000.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Dipolog/Davao/Tacloban	61,492.10	1	1.00	1.00	Magnolia Shipping Corporation	100.0
Dipolog/Zamboanga/Pagadian	31,042.80	1	1.00	1.00	Magnolia Shipping Corporation	100.0
Doong/ Hagnaya	6,440.00	1	1.00	1.00	Gaudencio Baruc	100.0
Doong/ Vito	2,850.00	1	1.00	1.00	Gaudencio Baruc	100.0
Dumaguete/ Bataan	284,173.68	1	1.00	1.00	Triton Shipping Corporation	100.0
Dumaguete/ Gingoog	50,331.90	1	1.00	1.00	Jones Carrier	100.0
Dumaguete/ Kiwalan	57,821.00	1	1.00	1.00	George and Peter Lines	100.0
Dumaguete/ Lapu-Lapu	92,523.55	1	1.00	1.00	George and Peter Lines	100.0
Dumaguete/ Larena	1,425,616.52	1	1.00	1.00	Palacio Shipping Inc.	100.0
Dumaguete/ Lazi	1,696.75	1	1.00	1.00	George and Peter Lines	100.0
Dumaguete/ Ormoc	48,922.36	1	1.00	1.00	Cebu Ferries Corporation	100.0
Dumaguete/ Polloc	4,941.06	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Dumaguete/ Siom	228,355.45	1	1.00	1.00	George and Peter Lines	100.0
Dumaguete/ Tandag	45,000.00	1	1.00	1.00	Felicito Geraldoy	100.0
Dumaguete/ Toledo	70,000.00	1	1.00	1.00	Inter-Island Maritime Corporation	100.0
Escalante/ Pulupandan	42,000.00	1	1.00	1.00	V- Lines	100.0
Ferna/ Oroq	204,416.10	1	1.00	1.00	George and Peter Lines	100.0
Gasan, Marinduque/ Pinamalayan, Or Mindoro	7,085.06	1	1.00	1.00	Milton Ian	100.0
General Santos/ Leyte (Isabel)	172,000.00	1	1.00	1.00	Uni-Orient Pearl Ventures Inc.	100.0
General Santos/ Masbate	32,748.96	1	1.00	1.00	William, Gothong & Aboitiz, Inc.	100.0
General Santos/ Mavias	466,059.87	1	1.00	1.00	Eugenio Chan	100.0
General Santos/ Pagadian	38,531.50	1	1.00	1.00	Galactic Shipping Inc.	100.0
General Santos/ Puerto Princesa	41,885.45	1	1.00	1.00	William, Gothong & Aboitiz, Inc.	100.0
Guimaras/ Kalibo	12,000.00	1	1.00	1.00	Gerardo Gubo	100.0
Guimaras/ Masbate	28,750.00	1	1.00	1.00	Gerardo Gubo	100.0
Guimaras/ Roxas City	10,200.00	1	1.00	1.00	Nomn Novyar	100.0
Guimaras/ Victorias	269,600.00	1	1.00	1.00	Gerardo Gubo	100.0
Hingatungan/ Bacagay	1,600.00	1	1.00	1.00	Leonardo Dauhog	100.0
Hingatungan/ Kikilo	2,500.00	1	1.00	1.00	Leonardo Dauhog	100.0
Hingatungan/ San Francisco	900.00	1	1.00	1.00	Leonardo Dauhog	100.0
Hingatungan/ Tib-o	8,000.00	1	1.00	1.00	Leonardo Dauhog	100.0
Iligan/ Basilan	35,566.50	1	1.00	1.00	Galactic Shipping Inc.	100.0
Iligan/ Batangas	319,500.00	1	1.00	1.00	William Michael Shipping Corp.	100.0

Appendix Table 6. Continued

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Iligan/ Cebu/ Amlan	109,480.21	1	1.00	1.00	William Michael Shipping Corp.	100.0
Iligan/ Cebu/ Pasar	25,844.00	1	1.00	1.00	William Michael Shipping Corp.	100.0
Iligan/ Davao/ Malalag	78,810.00	1	1.00	1.00	William Michael Shipping Corp.	100.0
Iligan/ Dipolog	258,190.63	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Iligan/ Dipolog	14,052.67	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Iligan/ Dipolog/ Davao	210,071.20	1	1.00	1.00	William Michael Shipping Corp.	100.0
Iligan/ Iloilo/ Amlan/ Picop	109,580.62	1	1.00	1.00	William Michael Shipping Corp.	100.0
Iligan/ Lazi	118,225.33	1	1.00	1.00	George and Peter Lines	100.0
Iligan/ Legaspi	770,550.00	1	1.00	1.00	Hosanna Shipping	100.0
Iligan/ Ormoc/ Cebu	28,968.00	1	1.00	1.00	William Michael Shipping Corp.	100.0
Iligan/ Ormoc/ Leyte	246,642.78	1	1.00	1.00	William Michael Shipping Corp.	100.0
Iligan/ Pasacao/ Cebu	58,575.00	1	1.00	1.00	William Michael Shipping Corp.	100.0
Iligan/ Pasar/ Cebu	51,688.00	1	1.00	1.00	William Michael Shipping Corp.	100.0
Iligan/ Picop/ Cebu	110,180.95	1	1.00	1.00	William Michael Shipping Corp.	100.0
Iligan/ Picop/ Davao	183,787.16	1	1.00	1.00	William Michael Shipping Corp.	100.0
Iligan/ San Jose	297,879.87	1	1.00	1.00	Hosanna Shipping	100.0
Iligan/ Sulu	7,356,551.92	1	1.00	1.00	William Michael Shipping Corp.	100.0
Iligan/ Zamboanga/ Davao	108,657.18	1	1.00	1.00	William Michael Shipping Corp.	100.0
Iligan/Zamboanga/Dipolog	26,431.50	1	1.00	1.00	Magnolia Shipping Corporation	100.0
Iloilo (Estancia)/ Cotabato	901,101.23	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Iloilo/ Aklan	15,945.23	1	1.00	1.00	Cebu Ferries Corporation	100.0
Iloilo/ Catarman	140,000.00	1	1.00	1.00	Ever Lines Inc.	100.0
Iloilo/ Contillon	35,000.00	1	1.00	1.00	Felicito Geraldoy	100.0
Iloilo/ Dadiangas	4,949,209.88	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Iloilo/ Danao Escalante	88,470.91	1	1.00	1.00	Jones Carrier	100.0
Iloilo/ Escalante	77,695.45	1	1.00	1.00	HBT Shipping Corp.	100.0
Iloilo/ Galo	10,000.00	1	1.00	1.00	Felicito Geraldoy	100.0
Iloilo/ Jetafi	24,500.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Iloilo/ Lamitan	217,068.00	1	1.00	1.00	Hadji Sab Tiri Jalali	100.0
Iloilo/ Magalona	19,900.00	1	1.00	1.00	Antonio Mogasa	100.0
Iloilo/ Mariveles	269,306.61	1	1.00	1.00	Jones Carrier	100.0
Iloilo/ Ormoc	35,750.00	1	1.00	1.00	V- Lines	100.0
Iloilo/ Pulupandan	123,354.55	1	1.00	1.00	HBT Shipping Corp.	100.0
Iloilo/ Subic	333,563.64	1	1.00	1.00	Jones Carrier	100.0
Iloilo/ Tagbilaran	119,393.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Iloilo/ Victorias City	298,851.00	1	1.00	1.00	Danilo Lampadero	100.0
Ipil/ Ormoc/ Iligan	196,068.33	1	1.00	1.00	William Michael Shipping Corp.	100.0
Jagna/ Bohol (Ubay)	88,125.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Jagna/ Gingoog	81,094.30	1	1.00	1.00	Jones Carrier	100.0
Jagna/ Nasipit	5,630.17	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Jagna/ PKS	88,125.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Jagna/ Sablayan	176,250.00	1	1.00	1.00	Lite Shipping Corporation	100.0

Appendix Table 6. Continued

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Jetafi/ Bais	30,018.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Jetafi/ Bohol (Ubay)	88,125.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Jetafi/ Legaspi	85,125.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Jolo/ Basilan	25,322.00	1	1.00	1.00	Den Tadus	100.0
Kaputian/ Sta Ana	1,069.00	1	1.00	1.00	Celeste Temperatura	100.0
Kawit/ Legros	70,000.00	1	1.00	1.00	Inter-Island Maritime Corporation	100.0
Kawit/ Madredejos	167,740.00	1	1.00	1.00	Saturnino Atienza	100.0
Leyte (Isabel)/ Batangas	180,000.00	1	1.00	1.00	Inter-Island Maritime Corporation	100.0
Leyte (Isabel)/ Dapitan	90,400.00	1	1.00	1.00	Triton Shipping Corporation	100.0
Leyte (Isabel)/ Pasacao	1,096,128.57	1	1.00	1.00	Palacio Shipping Inc.	100.0
Leyte (Isabel)/ Pulupandan	145,267.00	1	1.00	1.00	Triton Shipping Corporation	100.0
Leyte (Isabel)/ Roxas	30,575.00	1	1.00	1.00	V- Lines	100.0
Leyte/ Ozamis	40,950.00	1	1.00	1.00	Galactic Shipping Inc.	100.0
Leyte/ Pagadian	140,585.20	1	1.00	1.00	Galactic Shipping Inc.	100.0
Leyte/ Toledo	90,000.00	1	1.00	1.00	Inter-Island Maritime Corporation	100.0
Leyte/ Zamboanga	56,000.00	1	1.00	1.00	Ever Lines Inc.	100.0
Limasawa/ Burgos	50,700.00	1	1.00	1.00	Zenaida Petracorta	100.0
Loon/ Talibon	27,000.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Malangas/ Margos	30,991.21	1	1.00	1.00	Ever Lines Inc.	100.0
Malangas/ Subanipa	1,900.80	1	1.00	1.00	Magnolia Shipping Corporation	100.0
Mandaue/ Basilan	1,453,146.41	1	1.00	1.00	Jones Carrier	100.0
Mandaue/ Calbayog	86,053.51	1	1.00	1.00	Jones Carrier	100.0
Mandaue/ Catanduanes	116,869.29	1	1.00	1.00	Jones Carrier	100.0
Mandaue/ Masbate	346,750.00	1	1.00	1.00	Lina C. Echin	100.0
Mandaue/ Masbate	618,593.85	1	1.00	1.00	Jones Carrier	100.0
Mandaue/ Samar	4,168.00	1	1.00	1.00	Juana Lopez	100.0
Mandaue/ Zamboanga	70,000.00	1	1.00	1.00	Philip Go	100.0
Manila/ Aklan	4,186,374.02	1	1.00	1.00	William, Gothong & Aboitiz, Inc.	100.0
Manila/ Bais	4,186,374.02	1	1.00	1.00	Hosanna Shipping	100.0
Manila/ Calubian	71,424.14	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Manila/ Danao Escalante	1,311,000.00	1	1.00	1.00	Seaford Shipping Lines	100.0
Manila/ Iligan/ Margosatubig	86,073.20	1	1.00	1.00	Magnolia Shipping Corporation	100.0
Manila/ Iligan/ Siom	238,497.83	1	1.00	1.00	William Michael Shipping Corp.	100.0
Manila/ Liminancong	5,905,085.78	1	1.00	1.00	San Nicolas Lines Inc.	100.0
Manila/ Palawan/ Lucena/ Surigao	199,663.65	1	1.00	1.00	Amparo Shipping Corp.	100.0
Manila/ Polloc	19,590.50	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Manila/ Pulupandan	8,581,533.99	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Manila/ Toledo	81,426.90	1	1.00	1.00	Magnolia Shipping Corporation	100.0
Margos/ Subanipa	102,671.15	1	1.00	1.00	Ever Lines Inc.	100.0
Margos/ Talusan	35,592.00	1	1.00	1.00	Ever Lines Inc.	100.0
Marinduque/ Quezon	28,087.50	1	1.00	1.00	Julian Grimaldo	100.0
Masbate/ Maya	8,785.00	1	1.00	1.00	Arturo Susas	100.0

Appendix Table 6. Continued

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Masbate/ Zamboanga	64,650.32	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Mindoro/ Burunga	547,108.00	1	1.00	1.00	San Nicolas Lines Inc.	100.0
Mindoro/ Leyte (Isabel)	613,536.15	1	1.00	1.00	Palacio Shipping Inc.	100.0
Mindoro/ Libertad	1,786,875.00	1	1.00	1.00	San Nicolas Lines Inc.	100.0
Mindoro/ Semerara	1,138,966.00	1	1.00	1.00	San Nicolas Lines Inc.	100.0
Naga/ Maasin	47,727.21	1	1.00	1.00	Jones Carrier	100.0
Naval/ Bato	14,700.00	1	1.00	1.00	Cesar Sitjar	100.0
Naval/ Binamalayan	1,123.00	1	1.00	1.00	Teodolo Lapure	100.0
Naval/ Burabod	1,562.00	1	1.00	1.00	Teodolo Lapure	100.0
Naval/ Calvani	2,040.00	1	1.00	1.00	Teodolo Lapure	100.0
Naval/ Canduhao	257,000.00	1	1.00	1.00	Cesar Sitjar	100.0
Naval/ Casibang	2,029.00	1	1.00	1.00	Teodolo Lapure	100.0
Naval/ Hagonoy	4,440.00	1	1.00	1.00	Teodolo Lapure	100.0
Naval/ Maripiri	4,393.00	1	1.00	1.00	Teodolo Lapure	100.0
Naval/ Palompon	1,642.85	1	1.00	1.00	MY Lines, Inc.	100.0
Naval/ Trabugan	1,415.00	1	1.00	1.00	Teodolo Lapure	100.0
Naval/ Ulog	2,270.00	1	1.00	1.00	Teodolo Lapure	100.0
Naval/ Viga	2,025.00	1	1.00	1.00	Teodolo Lapure	100.0
Negros/ Pasig	243,105.00	1	1.00	1.00	William Michael Shipping Corp.	100.0
Nonoc/ Lapu-lapu	5,094,650.56	1	1.00	1.00	Terban Marine Corporation	100.0
Odiongan/ Oangay	30,100.00	1	1.00	1.00	Manuel Perez	100.0
Ormoc/ Camotes	329,740.00	1	1.00	1.00	Philippine Fast Ferry Corporation	100.0
Ormoc/ Dapdap	14,830.00	1	1.00	1.00	Sofronio Bogtai	100.0
Ormoc/ Dapitan	156,286.58	1	1.00	1.00	Triton Shipping Corporation	100.0
Ormoc/ General Santos	7,003.76	1	1.00	1.00	Cebu Ferries Corporation	100.0
Ormoc/ Kawit	5,320.00	1	1.00	1.00	Sofronio Bogtai	100.0
Ormoc/ Lanao	15,705.00	1	1.00	1.00	Sofronio Bogtai	100.0
Ormoc/ Leyte (Isabel)	110,000.00	1	1.00	1.00	Inter-Island Maritime Corporation	100.0
Ormoc/ Mandaue	201,200.00	1	1.00	1.00	Lina C. Echin	100.0
Ormoc/ Moabog	17,400.00	1	1.00	1.00	Sofronio Bogtai	100.0
Ormoc/ Monserrat	6,190.00	1	1.00	1.00	Sofronio Bogtai	100.0
Ormoc/ Pilar Camotes	291,090.50	1	1.00	1.00	Antonieto Pedericos	100.0
Ozamis/ Kolambugan	2,916.28	1	1.00	1.00	RP Tamula and Sons	100.0
Ozamis/ Tubod	4,361.78	1	1.00	1.00	RP Tamula and Sons	100.0
Ozamis/Zamboanga/Dipolog	24,968.10	1	1.00	1.00	Magnolia Shipping Corporation	100.0
Pagadian/Toledo/Zamboanga	44,427.20	1	1.00	1.00	Magnolia Shipping Corporation	100.0
Palawan/ Basilan	343,300.00	1	1.00	1.00	Ocean Express Shipping Corp	100.0
Palawan/ Dipolog	24,487.10	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Palawan/ Masbate	77,863.50	1	1.00	1.00	William, Gothong & Aboitiz, Inc.	100.0
Palawan/ Mindoro	9,200.00	1	1.00	1.00	Emma Maglente	100.0
Palawan/ Occi Mindoro	111,218.00	1	1.00	1.00	Vito Coronacion	100.0
Palawan/ Puerto Princesa	33,600.01	1	1.00	1.00	William, Gothong & Aboitiz, Inc.	100.0

Appendix Table 6. Continued

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Palawan/ Quezon	150,000.00	1	1.00	1.00	Marlo Calumbayan	100.0
Palawan/ San Jose	164,480.00	1	1.00	1.00	Franco Mabigat	100.0
Palawan/ Zamboanga	171,650.00	1	1.00	1.00	Ocean Express Shipping Corp	100.0
Pearl Farm/ Insular	15,525.00	1	1.00	1.00	Pearl Farm Beach Resort	100.0
Perez/ Atimonan	118,000.00	1	1.00	1.00	Eustaquio Caringal	100.0
Pililia/ South Harbor	21,826,623.68	1	1.00	1.00	Terban Marine Corporation	100.0
Placer/ Bogo	17,474.00	1	1.00	1.00	Patrocinio Cuaca	100.0
Puerto Princesa/ Pulupandan	159,700.00	1	1.00	1.00	Teng Tick Hua	100.0
Romblon/ Lucena	10,080.00	1	1.00	1.00	Rolando Liwanag	100.0
Romblon/ Roxas	15,300.00	1	1.00	1.00	Eulogo & Celia Mazo	100.0
Romblon/ San Agustin	60,500.00	1	1.00	1.00	Teodolo Mindoro	100.0
Romblon/ Sibuyan	904,000.00	1	1.00	1.00	Teodolo Mindoro	100.0
Romblon/Mangabong, Orr Mindoro	103,440.00	1	1.00	1.00	Victoriano Lo	100.0
Roxas/ Bantayan	3,000.00	1	1.00	1.00	Rodolfo Gabalonzo	100.0
Roxas/ Negros Occidental	6,000.00	1	1.00	1.00	Rodolfo Gabalonzo	100.0
Sablayan/ Bauan	184,450.00	1	1.00	1.00	Liwanag Mendoza	100.0
Sablayan/ San Jose	13,054.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Sagasa/ Alicia	3,010.85	1	1.00	1.00	Magnolia Shipping Corporation	100.0
Sagasa/ Talusan	80,248.71	1	1.00	1.00	Ever Lines Inc.	100.0
San Carlos/ Estancia	93,969.00	1	1.00	1.00	Negros Navigation Company	100.0
San Carlos/ Toledo	3,271,292.20	1	1.00	1.00	Danilo Lines	100.0
San Jose/ Antique	1,678,049.00	1	1.00	1.00	San Nicolas Lines Inc.	100.0
San Jose/ Bais	26,000.00	1	1.00	1.00	Lite Shipping Corporation	100.0
San Jose/ Talibon	40,915.00	1	1.00	1.00	Lite Shipping Corporation	100.0
San Juan/ Anilao	43,000.00	1	1.00	1.00	Lilia Flores	100.0
Siasi/ Sibutu, Tawi-tawi	131,291.00	1	1.00	1.00	Asman Jaide	100.0
Sta Ana/ Cogon	2,194.00	1	1.00	1.00	Roger Bandao	100.0
Sta Ana/ Kaputian	2,369.00	1	1.00	1.00	Martino Palacio	100.0
Sta Ana/ Mindanao	6696.45	1	1.00	1.00	Joel Bustamante	100.0
Sta Ana/ Pigasaan	60,998.60	1	1.00	1.00	Joel Bustamante	100.0
Sta Cruz/ Tucanga	1,419.00	1	1.00	1.00	Celeste Temperatura	100.0
Sto Tomas/ Talaga	30,000.00	1	1.00	1.00	Jose Castro	100.0
Subanipa/ Malangas	1,961.70	1	1.00	1.00	Magnolia Shipping Corporation	100.0
Subic/ Bislig	454,689.30	1	1.00	1.00	William Michael Shipping Corp.	100.0
Subic/ Navotas	353,786.45	1	1.00	1.00	Via Marine Corporation	100.0
Subic/ Pandacan	544,635.01	1	1.00	1.00	Via Marine Corporation	100.0
Subic/Batangas/Legaspi	2,605,207.00	1	1.00	1.00	La Felicidad Marine Corporation	100.0
Surigao/ Aklan	136,363.64	1	1.00	1.00	Hosanna Shipping	100.0
Surigao/ Cagdianao	47,533.00	1	1.00	1.00	Honesto Lipao	100.0
Surigao/ Calubian	260.84	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Surigao/ Gingoog	166,883.85	1	1.00	1.00	Eduardo Jarque	100.0
Surigao/ Lucena	3,263,398.14	1	1.00	1.00	Amparo Shipping Corp.	100.0

Appendix Table 6. Continued

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Surigao/ Mandaue	165,600.00	1	1.00	1.00	Lina C. Echin	100.0
Surigao/ Pinut-an	23,555.50	1	1.00	1.00	Vicente Mejia	100.0
Surigao/ Roxas	98,251.84	1	1.00	1.00	Jones Carrier	100.0
Surigao/ San Jose	26,000.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Surigao/ Talisay	125,600.00	1	1.00	1.00	Domingo Paredes	100.0
Surigao/ Zamboanga	81,584.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Tabango/ Bogo	14,540.00	1	1.00	1.00	Tabango Express	100.0
Tab-ok/ Bacagay	1,310.00	1	1.00	1.00	Pedro Felizarta	100.0
Tab-ok/ San Roque	1,060.00	1	1.00	1.00	Pedro Felizarta	100.0
Tab-ok/ Sta Lucia	490.00	1	1.00	1.00	Pedro Felizarta	100.0
Tacloban/ Balangina	108,747.00	1	1.00	1.00	Joedina Gumagay	100.0
Tacloban/ Bolusao	22,176.00	1	1.00	1.00	Rogelio Germones	100.0
Tacloban/ Catbalogan	32,708.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Tacloban/ Giporlos	5,000.00	1	1.00	1.00	Romulo Alvarino	100.0
Tacloban/ Lawaan	3,000.00	1	1.00	1.00	Felix Delantar	100.0
Tacloban/ Leyte (Isabel)	321,032.80	1	1.00	1.00	Palacio Shipping Inc.	100.0
Tacloban/ Lucena	198,000.00	1	1.00	1.00	Seaford Shipping Lines	100.0
Tacloban/ Mandaue	486,300.00	1	1.00	1.00	Lina C. Echin	100.0
Tacloban/ Masbate	52,000.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Tacloban/ Nabilid	118,209.00	1	1.00	1.00	Eduardo Jarque	100.0
Tacloban/ Ozamis	24,310.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Tacloban/ Roxas	467,885.00	1	1.00	1.00	Jones Carrier	100.0
Tacloban/ Sablayan	26,000.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Tacloban/ Sogod	64,833.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Tagbilaran/ Batangas	3,452,731.56	1	1.00	1.00	Terban Marine Corporation	100.0
Tagbilaran/ Bohol (Ubay)	89,840.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Tagbilaran/ Dipolog	141,001.24	1	1.00	1.00	Sulpicio Lines Inc.	100.0
Tagbilaran/ General Santos	6,873.87	1	1.00	1.00	Cebu Ferries Corporation	100.0
Tagbilaran/ Hinunangan	26,000.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Tagbilaran/ Lapu-Lapu	34,500.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Tagbilaran/ Leyte (Isabel)	32,500.00	1	1.00	1.00	V- Lines	100.0
Tagbilaran/ Liloan	21,810.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Tagbilaran/ Loon	38,400.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Tagbilaran/ Ozamis	3,056.05	1	1.00	1.00	William, Gothong & Aboitiz, Inc.	100.0
Tagbilaran/ San Carlos	48,185.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Tagbilaran/ San Fernando	60,000.00	1	1.00	1.00	Jones Carrier	100.0
Tagbilaran/ Talibon	113,100.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Tagbilaran/ Tandag	30,000.00	1	1.00	1.00	Felicito Geraldoy	100.0
Tagbilaran/ Zamboanga	41,775.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Talibon/ Colorado	10,292.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Talisay/ Tampi	19,358.00	1	1.00	1.00	ABC Liner	100.0
Talusan/ Alicia	3,255.10	1	1.00	1.00	Magnolia Shipping Corporation	100.0

Appendix Table 6. Continued

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Talusan/ Sagasa	8,636.50	1	1.00	1.00	Magnolia Shipping Corporation	100.0
Talusan/ Zamboanga	44,572.60	1	1.00	1.00	Magnolia Shipping Corporation	100.0
Tampi, San Jose/ Ayungon, Negros Oriental	4,687.95	1	1.00	1.00	Maayo Shipping, Inc.	100.0
Tampi, San Jose/ Bato, Samboan, Cebu	3,741,252.35	1	1.00	1.00	Maayo Shipping, Inc.	100.0
Tampi, San Jose/ Lazi, Siquijor	7,492.80	1	1.00	1.00	Maayo Shipping, Inc.	100.0
Tampi, San Jose/ Tan-awan, Oslob, Cebu	235,019.35	1	1.00	1.00	Maayo Shipping, Inc.	100.0
Tangil/ Dumanjug	102,324.00	1	1.00	1.00	Jefren D. Pages	100.0
Tinglay (Batangas)/ Mabini	89,650.00	1	1.00	1.00	Reynaldo Baleno	100.0
Tinglay (Batangas)/ Pisa	50,000.00	1	1.00	1.00	Rodolfo Manalo	100.0
Toledo/ Bohol	160,000.00	1	1.00	1.00	Inter-Island Maritime Corporation	100.0
Toledo/ Naval (Tacloban)	96,000.00	1	1.00	1.00	Inter-Island Maritime Corporation	100.0
Toledo/ Pasacao	70,000.00	1	1.00	1.00	Inter-Island Maritime Corporation	100.0
Toledo/ Talibon	170,000.00	1	1.00	1.00	Inter-Island Maritime Corporation	100.0
Zamboanga City/ Zamboanga del Sur/Norte	64,999.00	1	1.00	1.00	Den Tadus	100.0
Zamboanga del Sur/Norte/ Basilan	15,000.00	1	1.00	1.00	Den Tadus	100.0
Zamboanga/ Alicia	22,870.75	1	1.00	1.00	Magnolia Shipping Corporation	100.0
Zamboanga/ Bais	18,702.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Zamboanga/ Bislig	240,000.00	1	1.00	1.00	William Michael Shipping Corp.	100.0
Zamboanga/ Bohol (Ubay)	31,283.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Zamboanga/ Limaong	38,000.00	1	1.00	1.00	Hadji Jalleh Jayyari	100.0
Zamboanga/ Malabang	1,090,980.00	1	1.00	1.00	Sing Hock Chua Amik	100.0
Zamboanga/ San Jose	52,360.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Zamboanga/ Sandakan	1,763,851.60	1	1.00	1.00	Sampaguita Shipping Corp.	100.0
Zamboanga/ Siocon	767,373.55	1	1.00	1.00	Sampaguita Shipping Corp.	100.0
Zamboanga/ Siom	203,018.17	1	1.00	1.00	William Michael Shipping Corp.	100.0
Zamboanga/ Sirawai	550,111.40	1	1.00	1.00	Sampaguita Shipping Corp.	100.0
Zamboanga/ Sogod	39,200.00	1	1.00	1.00	Lite Shipping Corporation	100.0
Zamboanga/ Tungawan	10,000.00	1	1.00	1.00	Hadji Jalleh Jayyari	100.0
Routes with at least 2 operators						
Routes with substantial competition						
Bacolod/ Batangas	1,806,755.16	2	0.56	1.78	Terban Marine Corp, La Felicidad Marine Corp	100.0
Bacolod/ General Santos	1,770,738.41	3	0.39	2.60	WG&A, Palacio Shipping Lines, Negros Navigation	100.0
Bacolod/ Tagbilaran	169,190.50	2	0.50	1.98	Philip Go, Lite Shipping Corp	100.0
Bataan/ (Dumanguit)	38,924.00	2	0.50	1.98	Almyre Cortes, Santiago Regalado	100.0

Appendix Table 6. Continued

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Batangas/ Anibong	4,281,575.98	2	0.52	1.91	La Felicidad Marine Corp Terban Marine Corp	100.0
Batangas/ Aparri	11,986,524.64	2	0.55	1.83	La Felicidad Marine Corp Terban Marine Corp	100.0
Batangas/ Poro	52,335,700.49	2	0.50	1.99	La Felicidad Marine Corp, Terban Marine Corp	100.0
Batangas/Masbate/Calapan	1,524,746.53	2	0.59	1.71	Terban Marine Corp, La Felicidad Marine Corp	100.0
Butuan/ Jagna	1,252,878.38	2	0.50	1.98	Sulpicio Lines, Cebu Ferries Corp	100.0
Cagayan de Oro/ Bataan	192,159.45	2	0.61	1.64	Ocean Express, Jones Carrier	100.0
Cagayan de Oro/ Davao	206,142.15	4	0.28	3.56	Eastern Pacific Lines, Cebu Ferries Corp, Lorenzo Shipping Corp, Sulpicio Lines	100.0
Cagayan de Oro/ General Santos	222,078.37	3	0.82	1.22	Galactic Shipping, Cebu Ferries Corp, Lorenzo Shipping Corp	100.0
Cebu/ Bais	47,833.00	2	0.57	1.76	Lite Shipping Corp, Conrado Geraldoy	100.0
Cebu/ Batangas	327,000.00	2	0.50	1.99	Cebu Ferries Corp, Phil Fast Ferry Corp, Palacio Shipping Inc	100.0
Cebu/ Pasacao	364,281.50	3	0.36	2.78	Palacio Shipping Lines, Ever Lines, Sultan Shipping	100.0
Cotabato/ General Santos	75,844.10	3	0.35	2.85	Sulpicio Lines, Lorenzo Shipping Corp, Cebu Ferries Corp	100.0
Cuyo/ Roxas	19,607.59	2	0.56	1.78	Jose Pedida, Virgilio Arbolado	100.0
Davao del Sur/ Gen Santos	152,124.10	3	0.38	2.65	Francisco Alboroto, Dominga Ligoyligoy, Aurelio Leong	100.00
Dipolog/ Jagna	927,410.25	2	0.54	1.87	Eduardo Jarque, Jones Carrier	100.0
Guimaras/ Negros Occidental	193,974.75	2	0.53	1.88	Neva Quezon, Escolastico Geonanga	100.0
Iloilo/ Cuyo	25,542.56	2	0.52	1.92	Jose Pedida, Virgilio Arbolado	100.0
Iloilo/ Dumaguete	171,092.91	2	0.50	2.00	HBT Shipping Corp, Lorenzo Shipping Corp	100.0
Iloilo/ Masbate	100,196.00	2	0.59	1.69	Miller Santiago, Michael Jude Placencia	100.0
Iloilo/ Pasacao	242,000.00	2	0.51	1.95	Ocean Express Shipping Corp, Rover Shipping Lines	100.0
Iloilo/ Roxas	41,150.00	2	0.53	1.89	Celso Arboleda, Rodolfo Gabalonzo	100.0
Iloilo/ San Jose, Mindoro	160,007.27	2	0.53	1.89	HBT Shipping Corp, V- Lines	100.0
Manila/ Jolo	402,000.00	2	0.53	1.90	Ocean Express Shipping Corp, Ever Lines Inc	100.0
Masbate/ Bauan	167,910.00	2	0.56	1.79	Aquilina Guro, V- Lines	100.0

Appendix Table 6. Continued

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Surigao/ Basilica	150,715.00	2	0.59	1.69	Lina Riega, Cesar Borja	100.0
Surigao/ Dipolog	1,770,229.22	2	0.52	1.91	Eduardo Jarque, Jones Carrier	100.0
Tab-ok/ San Francisco	16,241.30	2	0.62	1.62	Leonardo Dauhog, Pedro Felizarta	100.0
Tacloban/ Mindoro (San Jose)	78,500.00	2	0.56	1.80	V- Lines, Lite Shipping Corp	100.0
Tagbilaran/ Toledo	137,500.00	2	0.50	2.00	Inter-island Maritime Corp, Lite Shipping Corp	100.0
Zamboanga/ Dipolog	77,834.90	2	0.53	1.87	Galactic Shipping, Magnolia Shipping Lines	100.0
Zamboanga/ Lamitan	246,540.19	2	0.56	1.77	Joyalcyd Corp, Sing Hock Chua Amik	100.0
Zamboanga/ Sitangkai	781,615.70	2	0.50	2.00	Sampaguita Shipping Corp, Magnolia Shipping Corp	100.0
Zamboanga/ Subanipa	354,474.61	2	0.58	1.73	Magnolia Shipping Lines, Ever Lines	100.0
Zamboanga/ Talusan	62,399.61	2	0.55	1.82	Magnolia Shipping Lines, Ever Lines	100.0
Routes with only 1 effective competitor						
Bacolod/ Cagayan de Oro	19,220,657.32	6	0.83	1.20	Negros Navigation	91.2
Bacolod/ Zamboanga	1,607,320.06	3	0.74	1.35	WG&A Philippines	85.2
Batangas/ Calapan	187,665,518.13	4	0.98	1.02	Phil Fast Ferry Corp	99.0
Batangas/ Pasacao	4,435,253.24	2	0.93	1.08	Terban Marine Corp	96.3
Batangas/Calapan/Pasacao	2,060,381.83	2	0.80	1.24	Terban Marine Corp	89.0
Baybay/ Dipolog	1,113,681.86	2	0.83	1.20	Eduardo Jargue	90.7
Benoni/ Balingoan	1,419,177.25	2	0.96	1.04	RP Tamula and Sons	98.0
Cagayan de Oro/ Butuan	26,369.56	2	0.97	1.03	Lite Shipping Corp	98.6
Cagayan de Oro/ Cotabato	2,384,611.52	2	0.78	1.29	Cebu Ferries Corp	87.2
Cagayan de Oro/ Ormoc	1,272,943.29	2	0.92	1.08	Cebu Ferries Corp	96.0
Cagayan de Oro/ Zamboanga	483,206.18	3	0.51	1.27	Lorenzo Shipping Corp	71.1
Catbalogan/ Villareal	322,025.00	2	0.97	1.03	Avelino Arraz	98.4
Cebu/ Catbalogan	1,768,496.58	3	0.89	1.12	Lapu-lapu Shipping Lines	94.3
Cebu/ Maasin	2,337,195.98	3	0.77	1.31	Cokaliong Shipping Lines	86.9
Cebu/ Tandag	1,354,200.00	2	0.84	1.19	BCT Shipping Lines	91.1
Dumaguete/ Cagayan de Oro	5,698,152.18	4	0.76	1.31	WG&A Philippines	87.1
Dumaguete/ Cotabato	1,236,068.40	3	0.87	1.15	Cebu Ferries Corp	93.3
Dumaguete/ Dadiangas	7,195,808.35	2	0.97	1.03	Sulpicio Lines	98.6
Dumaguete/ General Santos	11,467,787.41	6	0.74	1.36	Cebu Ferries Corp	84.8
Guimaras/ Pulupandan	81,190.00	2	0.77	1.29	Rolando Gamilong	87.0
Hingatungan/ Tab-ok	13,830.00	2	0.75	1.33	Leonardo Dauhog	85.3
Iligan/ Ormoc	225,963.45	2	0.97	1.03	Cebu Ferries Corp	98.4
Iloilo (Gigante Norte)/ Iloilo(Estancia)	138,309.50	2	0.77	1.30	Roger Marcelo	86.9
Iloilo/ Bantayan	125,250.00	2	0.74	1.36	Gerardo Gubo	84.4
Jolo/ Bongao	217,105.60	2	0.87	1.16	Sampaguita Shipping Corp	92.8

Appendix Table 6. Continued

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Liloan/ Sibulan	10,280.00	3	0.74	1.35	Max Baat	85.3
Mandaue/ Bantayan	1,571,062.17	2	0.82	1.23	Douglas del Rosario	89.7
Manila/ Catbalogan	3,576,428.10	2	0.98	1.02	Sulpicio Lines	99.1
Masbate/ Roxas	189,850.00	2	0.72	1.39	Isidro Refil	83.2
Maya/ San Isidro	158,180.00	2	0.75	1.33	Arturo Susas	85.4
Ormoc/ Masbate	645,907.79	2	0.99	1.01	Sulpicio Lines	99.5
Pagadian/ Zamboanga	405,090.55	2	0.89	1.12	Sampaguita Shipping Corp	94.4
Sta Rosa/ Dapdap	22,008.00	2	0.98	1.02	Rufino Augusto	99.2
Surigao/ Dapa	8,345.00	2	0.79	1.27	Domingo Paredes	88.0
Tab-ok/ Kikilo	9,710.00	2	0.86	1.16	Leonardo Dauhog	92.7
Tab-ok/ Tibo	22,515.80	2	0.77	1.30	Pedro Felizarta	86.7
Tacloban/ Batangas	2,870,870.42	2	0.98	1.02	La Felicidad Marine Corp	98.8
Tacloban/ General Santos	485,020.42	3	0.75	1.33	WG&A Philippines	86.1
Zamboanga/ Pagadian	2,524,315.25	2	0.74	1.35	Abdusakar Tan	84.8
Routes with mild competition						
Antimonan/ Alabat	120,603.60	3	0.44	2.28	Jose Leal, Agustin Nepomuceno	89.8
Babak/ Sasa	7,937.20	6	0.68	1.47	Dolorosa Ibo	82.0
Bacolod/ Bauan	142,646.25	2	0.67	1.49	Aquilina Guro	79.3
Bacolod/ Davao	2,107,167.25	4	0.59	1.69	WG&A Philippines, Negros Navigation	94.9
Bacolod/ Iligan	845,039.66	5	0.28	3.59	WG&A Philippines, Rover Shipping Services, William Michael Shipping Corp	89.0
Bacolod/ Romblon	46,500.00	3	0.51	1.96	Jaime Geraldoy, Eva Norono	94.6
Bacolod/ Tacloban	257,328.47	5	0.47	2.12	Palacio Shipping, WG&A, Lite Shipping Corp	41.3
Batangas/ Legaspi	7,631,981.52	2	0.63	1.58	La Felicidad Marine Corp	75.9
Batangas/ Mindoro	102,349.90	2	0.63	1.59	Dionisio Albania	75.6
Batangas/ Pandacan	9,849,942.35	2	0.66	1.52	La Felicidad Marine Corp	78.3
Batangas/Calapan/Masbate	3,857,366.46	3	0.53	1.88	La Felicidad Marine Corp, Terban Marine Corp	94.8
Boracay/ Caticlan	525,474.50	35	0.25	3.97	Dominador Taglorin, Felix Rabasto, Charlito Villanueva, Dioneto Villanueva	67.4
Butuan/ Magallanes	263,707.50	10 3	0.32	3.15	Eduardo Donan, Rodolfo Monilla, Edilberto Bajao	62.8
Cagayan de Oro/ Batangas	4,428,294.45	3	0.67	1.49	Lorenzo Shipping Corp	80.9
Cebu/ Camotes	8,565,790.15	5	0.39	2.55	Cebu Ferries Corp, Phil Fast Ferry Corp	86.4
Cebu/ Cotabato	16,838,080.91	10	0.52	1.94	Cebu Ferrries Corp, Sulpicio Lines	88.0
Cebu/ Iligan	42,424,129.13	3	0.62	1.62	Cebu Ferries Corp, Sulpicio Lines	89.0

Appendix Table 6. Continued

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Cebu/ Legaspi	725,000.00	3	0.39	2.56	Victan Transport Services, Hosanna Shipping	85.5
Cebu/ Leyte (Isabel)	336,314.50	4	0.46	2.20	Hosanna Shipping Corp, Palacio Shipping Inc	88.0
Cebu/ Naval	813,952.28	3	0.61	1.63	MY Lines, San Juan Shipping Lines	92.6
Davao/ Iligan	2,124,285.09	3	0.43	2.33	William Michael Shipping Corp, Cebu Ferries Corp	57.6
Dumaguete/ Davao	2,357,924.61	4	0.34	2.94	Cebu Ferries Corp, Lorenzo Shipping, Palacio Shipping Inc	90.3
Dumaguete/ Dipolog	940,929.87	3	0.48	2.09	Jones Carrier, WG&A Philippines	97.2
Dumaguete/ Iligan	339,605.86	5	0.31	3.26	Cebu Ferries Corp, George and Peter Lines, Ever Lines	89.2
Dumaguete/ Siquijor	124,429.40	5	0.47	2.12	Mabjunnix Shipping, Cesar Sumalpong	85.2
Dumaguete/ Tacloban	104,546.94	3	0.49	2.03	Philip Go, Lite Shipping	89.8
Iligan/ Zamboanga	1,961,677.41	6	0.35	2.87	Cebu Ferries Corp, Ever Lines, Hosanna Shipping	87.8
Iloilo/ Batangas	5,824,441.02	4	0.65	1.54	Via Marine Corp	78.2
Iloilo/ Butuan	176,425.62	3	0.43	2.30	Inter-island Maritime Corp, Sulpicio Lines	88.1
Iloilo/ Cagayan de Oro	17,632,866.97	9	0.49	2.05	Negros Navigation, WG&A	86.7
Iloilo/ Guimaras (Jordan)	1,967,178.25	24	0.10	10.30	SKMMOOA, Maria Balena, Santiago Siloterio, Anacleto Galabo, Anita Galve, Ruthelo Geonanga, Eduardo Gando, Nelia Canon, Fernando Espinosa, Nerissa Pelingon	69.9
Iloilo/ Negros Occidental	32,100.00	2	0.70	1.44	Romeo Geraldoy	81.3
Iloilo/ Tacloban	442,697.73	4	0.52	1.91	WG&A Philippines, Sulpicio Lines	80.1
Iloilo/ Zamboanga	10,892,946.35	5	0.50	2.01	WG&A Philippines, Sulpicio Lines	84.4
Jolo/ Siasi	269,735.15	4	0.36	2.78	Hadji Ahmad, Asman Jaide, Sampaguita Shipping Corp	94.7
Jolo/ Sitangkai	45,876.80	2	0.68	1.47	Sampaguita Shipping Corp	79.9
Jolo/ Tawi-tawi	78,889.00	2	0.66	1.51	Den Tadus	78.6
Jolo/ Zamboanga	7,258,975.93	10	0.17	5.97	Erwin Tan, Sampaguita Shipping Lines, Hadji Tan, Radzma Burahan, Anton Burahan, Hadji Daud	85.9
Mamburao/ Bauan	149,455.56	2	0.63	1.58	Liwanag Mendoza	75.7
Manila/ Escalante	172,000.00	2	0.64	1.56	Ocean Express Shipping Lines	76.7
Siasi/ Bongao	336,099.65	3	0.53	1.90	Hadji Hahmad, Sampaguita Shipping Corp	94.8
Sitangkai/ Bongao	198,573.75	3	0.70	1.43	Hadji Hahmad	82.5
Sitangkai/ Siasi	55,298.85	2	0.71	1.40	Sampaguita Shipping Corp	82.6

Appendix Table 6. Continued

Route	Cargo Revenue	Number of Operators	Herfindahl Index (HHI)	Effective Competitors		
				Number= 1/HHI	Name of Operator/s	Share
Sta Ana/ Penaplata	5,085.00	7	0.17	5.97	Erlinda Atianzar, Andrea Vargas, Caesar Playda, Alejandro Requina, Jesus Basarten, Flaviano Cuenca	91.0
Sta Ana/ Sta Cruz	6,612.00	3	0.47	2.12	Jesus Plarilla, Diana Barail	87.1
Sta Cruz/ Gen Luna	175,980.00	2	0.70	1.42	Marites Pielaga	81.9
Tacloban/ Dipolog	6,558,856.11	3	0.50	1.99	Jones Carrier, Eduardo Jarque	97.7
Tacloban/ Gingoog	2,922,366.00	2	0.65	1.55	Jones Carrier	77.1
Tacloban/ Iligan	1,477,130.15	3	0.54	1.85	Cebu Ferries Corp, Hosanna Shipping	97.4
Tacloban/ Zamboanga	144,690.38	4	0.60	1.67	Sulpicio Lines, William Chiong	89.8
Zamboanga/ Basilan	1,033,976.45	4	0.31	3.26	Alibasa Alih, Jovito Chiong, George Tan	92.1
Zamboanga/ Bongao	1,665,807.60	3	0.65	1.54	Sampaguita Shipping Corp	58.0
Zamboanga/ Leyte (Isabela)	100,750.00	2	0.68	1.47	Sing Hock Chua Amik	80.1
Zamboanga/ Malangas	223,787.19	2	0.67	1.50	Ever Lines	78.8
Zamboanga/ Margosatubig	302,255.13	2	0.72	1.40	Ever Lines	82.9
Zamboanga/ Sagasa	109,345.01	2	0.65	1.53	Magnolia Shipping Corp	77.5
Zamboanga/ Siasi	1,327,871.60	4	0.41	2.42	Hadji Mubin Daud, Magnolia Shipping Corp	88.7
Zamboanga/ Tawi-tawi	968,649.00	4	0.36	2.74	Jasper Askalani, Lino Lao, Jainal Tiking	99.0

Source: 1998 Annual Traffic Reports of Shipping Companies submitted to the MARINA.

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