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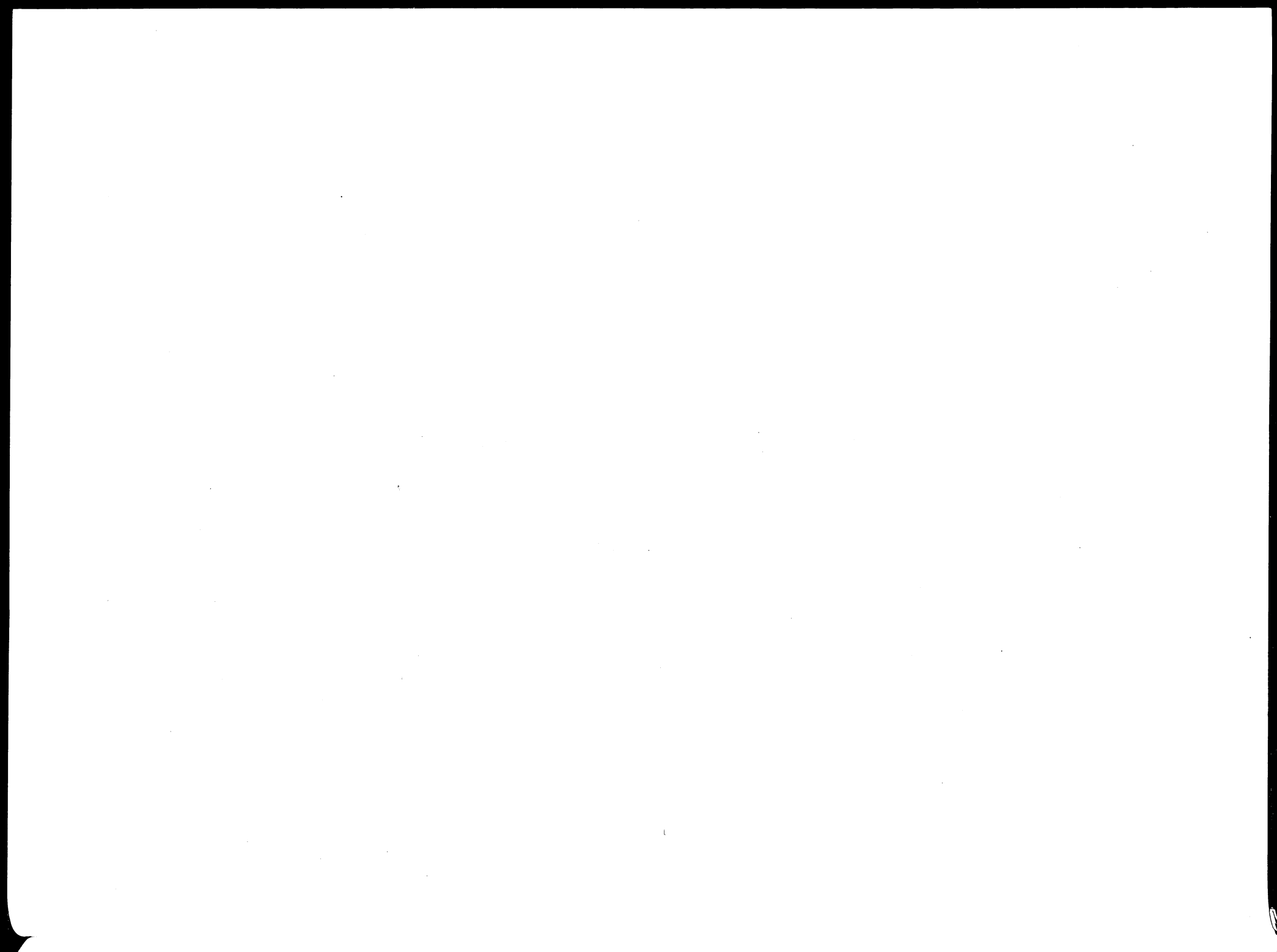
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SESSION VIII

"MARINE"



THE IMPACT OF U.S. REGULATORY
PRACTICES ON THE PRODUCTIVITY OF
OCEAN LINER SERVICES*

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ABSTRACT

The United States stands alone among the nations of the world in its attempt to unilaterally regulate transnational ocean liner services, which carry a wide range of manufactured goods as well as some raw materials. The major reason for present U.S. regulatory policies in the matter of scheduled ocean transportation is its fundamental distrust of any form of cooperation among competitors.

The liner industry, because of unique technical and economic characteristics, has given rise to the formation of ocean conferences which are coordinating agreements among operators of liner vessels. While ocean conferences are permitted - even encouraged - by the vast majority of nations, they are only reluctantly accepted in the United States, and then only in their weakest form, the so-called "open conferences".

This paper provides a critical review of American regulatory practices in maritime transport. It is argued that these practices presently result in excess costs in U.S. trades in the order of \$1 billion annually.

The liner industry cannot function efficiently under the rules imposed by the United States which has failed to recognize that in the liner industry technical efficiency is of considerably greater importance than market efficiency.

INTRODUCTION

VIII-3

Federal regulation of the American economy has grown steadily ever since the creation of the Interstate Commerce Commission in 1887. However, in the past two decades the growth of regulation has reached near epidemic proportions, spreading at an exponential rate. During the 1970s, federal regulatory budgets increased sixfold, and the number of pages of federal regulations in the federal register tripled. (1) While federal regulation is particularly prevalent in transportation and communications, it has by now spread also to a number of other industries.

It is not surprising that this relentless penetration by government into the daily life of a wide range of businesses should generate a counter-movement towards deregulation. The interesting aspect of this movement, however, is that the driving force has come not from industry but rather from a group of reform-minded economists and politicians. They argue that regulation at best has little effect, and at worst that it increases costs and leads to higher prices. For instance, Jordan has found that passenger fares in the U.S. by the early 1960s had risen considerably above what they would have been in the absence of regulation. In fact, he suggests that fare levels without regulation would have been from 9 to 50 percent lower than their regulated levels. (2) Among the reasons given for this paradox were excessive service and capacity competition. MacAvoy has concluded that:

Since the mid-1960s, price and entry regulation has restricted profitability so widely that production growth has been slowed down in the energy and transportation industries. Rate increases have been less than cost increases, causing declines in capacity growth and production growth in these industries during the early 1970s. As a result most of the public utilities and common-carrier industries failed to extend service to new communities or customers at quality levels comparable to those in the 1950s and early 1960s. (3)

Whatever results economists obtain, they appear to agree on one thing: the regulated industries should be turned over to the market place where the invisible hand shall replace the heavy fist of the bureaucratic regulator.

Theoretically, this solution should have the added advantage of ridding our society of a great number of lawyers and economists. Clearly, if the market place works as it is supposed to - which is perfectly - there really is not much need to study it. However, any such ideas must be dismissed as idle daydreams. The so-called deregulation which is taking place in the U.S. transportation industry in fact constitutes reregulation. Regulation of transportation has generally exempted the carriers from U.S. antitrust laws, something which permitted the existence of rate bureaus and rate negotiations among competing transport companies. When such special legislation is removed, the antitrust laws apply with unmitigated force and lawyers and economists who previously found shelter in regulatory commissions might simply move down the street to the Antitrust Division of the Justice Department.

In one particular case, the international ocean liner industry, the Justice Department has suggested that it might welcome such a development:

One way to increase competition in ocean shipping would be to repeal the Shipping Act [of 1916]. An unregulated shipping industry would be subject to both the common law of common carriers and the antitrust laws. (4)

It may therefore be surprising to some that at the present time (February 1982), two bills before the U.S. Congress suggest a regulatory reform for liner

transport and ocean conferences which in fact would provide greater, and not less protection for ocean liner shipping from antitrust prosecution. Whereas the United States in general is firmly embarked upon the road towards the Deregulated Society, there are signs that an exception may indeed be made for liner shipping. (5)

To understand why this may happen, it is necessary to consider the havoc that present U.S. regulatory practices have wrought upon the liner industry serving the U.S. trades, particularly since the introduction of containerized transportation of general cargo in the mid-1960s.

U.S. REGULATION OF LINER TRADES

American regulation of liner transportation is characterized by a fundamental dichotomy, some would even say by schizophrenia. The original Shipping Act of 1916 reflected an understanding on the part of Congress of the rather obvious fact that liner services because of their very nature are international, and that any extensive unilateral regulation would inevitably violate the principle of comity among nations (6), thereby giving rise to serious international jurisdictional conflicts. The main reason the United States has introduced special legislation on liner services is the practice of self-regulation frequently observed on liner services. For reasons which will be discussed in a subsequent section, shipowners of liner vessels have found it useful, and in many cases necessary, to establish conferences in order to establish tariffs and other terms of carriage. It would be incorrect to state that a conference is a rate bureau, but the analogy may serve as a short-hand explanation. Additionally, it should be noted that in many trades outside of the United States, conferences play a useful role in coordinating services in order to improve capacity utilization of vessels.

In the absence of special legislation, the very existence of liner conferences would be illegal under U.S. antitrust statutes. The Shipping Act of 1916 was therefore intended to provide antitrust exemption for conference agreements duly registered with U.S. Shipping Board (7), the present Federal Maritime Commission. It is important to emphasize the deep-seated suspicion that prevails in the United States towards any form of agreements among competitors. The following quote is the final word of a U.S. Justice Department study of the liner industry:

It is unlikely that any concerted activity by steamship lines is so innocuous that it should be permitted without the FMC deciding whether the specific agreement meets the standards of Section 15 [of the Shipping Act]. (8)

There are presently an increasing number of knowledgeable Americans who are beginning to question the theoretical basis of antitrust legislation. This development is of the greatest importance in an era of deregulation (which as we have stated, has for effect the full application of antitrust statutes), and merits a brief excursion into the economics of monopoly and collusion.

MONOPOLY AND COLLUSION IN ECONOMIC THEORY

Classical economics extols the superiority of "free and perfect competition" over all other forms of market structure, such as oligopoly, monopoly and cartels. (9) What is sometimes forgotten is that perfect competition can only exist under certain theoretical conditions, such as a large number of sellers, all having a small market share, and a large number of buyers none of whom is large enough to enable him to influence the market. The goods or services sold must be "infinitely divisible";

that is, they can be offered on the market in any quantity. Also, no economies of scale can be available to the producer. Under such circumstances, we might have a perfect market where rivalry among sellers assures buyers of the lowest possible prices and results in the most efficient use of society's scarce resources.

On the other hand, the absence of a competitive market structure is generally believed to be a source of monopoly profits and market inefficiency resulting from a distortion in the allocation of resources.

The difficulty with this line of reasoning is that it does not correspond to the reality of today's technology. It was a source of amusement to the Western World when Communist China some years back attempted to establish a steel industry based on small cooperative village enterprises. Their approach was undoubtedly consistent with "perfect competition", yet hopelessly inefficient in terms of physical productivity. This example illustrates the basic conflict between an efficient market and efficient production.

It is often taken as axiomatic that competition always reduces prices, whereas in fact its effect may be to increase costs and consequently to increase prices in the long run. While industrial economists have long been aware of the inadequacy of the degree of competition as the sole criterion of social welfare, academic economists specializing in welfare economics and regulation have only recently begun to be concerned about the inherent ambiguity of competition. According to Dewey, the theoretical underpinnings of antitrust regulation are much weaker than hitherto believed:

As the intellectual foundations of antitrust have crumbled and collapsed, one has so far retained both its nearly universal acceptance and its academic respectability. Almost without exception, economists and lawyers have continued to assume that the case against price fixing - collusion - is so self-evident that it does not require detailed examination. Indeed, the hostility to price fixing is the one feature of American antitrust that seems to be exportable - witness, for example, its continuing incorporation into the cartel policy of the European Common Market. The purpose of this article is to suggest that even the "evil" of collusion can no longer be taken for granted - and, by implication, that a complete and skeptical review of the conspiracy and tacit conspiracy doctrines of antitrust is called for.

.....

The advocates of strong measures against price fixing and information exchanges should no longer be allowed to treat the welfare case for their position as nearly self-evident. It is not.(10)

These statements to the effect that not only monopoly but even collusion may deserve at least a second hearing, cannot be lightly dismissed. Arguments to the effect that any agreements among sellers should be deemed undesirable ipso facto must be rejected. It must be pointed out that Dewey included outright collusion in his analysis, something which goes considerably beyond the usual practices of liner conference. The essential aspect of what some call "the conference problem" is that there are important trade-offs between efficiency in the market place and production (or "technical") efficiency. This subject has been studied in depth by Leibenstein. He presents evidence on the potential effect of eliminating monopolies in a national economy and on the benefits of reducing or eliminating restrictions to international trade, and concludes that:

In both cases the benefits attributed to the reallocation of resources turn out to be exceedingly small. (11)

In general, the results show that the elimination of barriers to the free flow of resources (i.e., the creation of more efficient markets) would increase income by much less than one percent. Leibenstein suggests that the economic welfare loss from "allocative inefficiency" - market imperfections - is very small and that the greatest room for improvement is in what he calls "X-efficiency", a term which covers a range of nonmarket factors, and in the present context embraces technical operating efficiency as measured by vessel utilization:

The essence of the message is that if microeconomists are interested in efficiency, then in most cases their talents would be more fruitfully employed if they studied the determinants of X-efficiency rather than allocative efficiency. (12)

The arguments presented above suggest two things. First, one cannot presume that a reduced level of competition necessarily implies a welfare loss. On the contrary, in some cases it may be advantageous to society as a whole to allow a lesser degree of competition in order to achieve a socially more acceptable level of productivity. Although this contradicts conventional doctrine on the subject, there is strong theoretical and empirical evidence to support the above propositions.

Secondly, it should be observed that the trade-off between allocative efficiency and X-efficiency is not the same in all industries. The question, then, is whether the liner industry is one where market efficiency should take precedence over X-efficiency or not. This is a question of economic diagnosis which cannot be reduced to a few standard formulae, nor expressed merely in terms of intuitive thinking.

ECONOMIC CHARACTERISTICS OF LINER SERVICES

The preceding section should not be taken to imply that all cartels or monopolies are desirable. They are not all good, but nor are they all evil. The danger is, however, that economic theory when translated to the policy level tends to become dogmatic and rigid. Theories appear to have surprisingly long lives, and the more general the theory is the more its longevity increases.

Of course, theory is necessary, but if it is to serve for policy purposes, it is necessary that it be tempered by reality. (13) Industries operate in different environments and under different demand and cost conditions. Antitrust legislation unfortunately tends to use a shotgun approach which may be more of less relevant, depending on the characteristics of any given industry.

We are going to argue that the liner industry indeed is one that displays unique technical and economic characteristics, justifying industry-specific regulation and by implication, exemption from general antitrust regulation. Space allows only a brief summary of the salient points. For this reason it may be useful to provide a summary of the methodology underlying this paper.

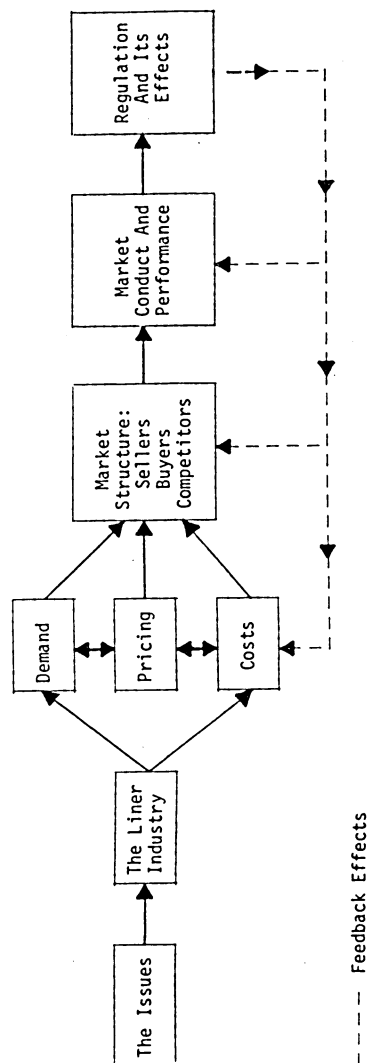
Any industry study must necessarily consider a wide range of variables, most of which are interdependent. Figure 1 illustrates the methodology used in our analysis of the liner industry. (14) It will be recognized that this plan corresponds to the general framework known as Industrial organization, originally developed by Joe S. Bain. (15)

The objective is to achieve an analysis of the structure of the liner industry. Much of the available literature on the liner industry has concentrated on market behavior of liner conferences.(16) This is not sufficient if one wants to explain the

Figure 1

AN ANALYTICAL APPROACH

TO THE STUDY OF LINER CONFERENCES



VIII-7

Source: Gunnar K. Sletmo and Ernest W. Williams, Jr., Liner Conferences in the Container Age. (New York: Macmillan, 1981), p. xxxiii.

economic performance of the industry and evaluate the economic impact of regulation.

We found that liner shipping constitutes "a special case", i.e., an industry where application of general antitrust laws leads to a welfare loss. Some reasons refer to the structure of the liner industry whereas others relate to competitive conditions. (17)

The special nature of liner services as opposed to other forms of shipping is attributable to its unique combination of supply and demand characteristics. The ocean liner operator is faced with the obligation to provide service even if it means sailing with a half-empty ship. Therefore, what makes liner shipping different from other forms of ocean transport is the necessity to provide scheduled service in the face of fluctuating demand from a large number of customers.

Scheduled services operate in markets where the typical unit of demand (such as the single container) is small relative to the technical unit of supply, which is the ship's carrying capacity for a given voyage. This relationship between demand and supply is the core of the pricing difficulty that exists, not in transportation generally, but with respect to scheduled service in all kinds of transportation, and particularly where vehicle capacity is large relative to total demand as in pipeline and liner operations. (18)

The fundamental economic characteristics of scheduled ocean services can be summarized as follows:

1. Given the relatively high fixed costs associated with a liner voyage, there will be a substantial difference between short- and long-run costs;
2. Given the fact that there are many shippers making use of the capacity on a given voyage, we are faced with a significant problem of common costs;
3. Marginal costs associated with a given shipment are minimal compared to the average total costs for the same shipment;
4. Unused capacity is wasted and will in the long run have to be paid for by those who use the service;
5. The pricing decision and the investment decision are two widely separated decisions;
6. Vessel size is very large relative to most trade routes.

The unique aspect of liner shipping compared with other forms of ocean transport, is a combination of special demand characteristics (the unit of demand being very small relative to the unit supply) and low short-run marginal costs. The pricing problems of liner services are more akin to those of the modern toll road than to those of tanker or dry-bulk services. This makes vessel utilization a critical variable. The problem of liner pricing could degenerate into a vicious circle as at low vessel utilization, the average cost per shipment would become very high, perhaps so high as to risk a reduction of demand. This result would generate even higher rates, and the circle might repeat itself.

The above summary stresses the importance of vessel utilization as the critical variable in achieving efficient liner operations. This leaves open the question of the market power of the liner industry, a subject which will be treated below.

MARKET POWER OF LINER CONFERENCES

The market structure of the liner industry suggests that there is a real potential for price instability, outright price wars and waste of resources. This argument never seems to cut much ice in some circles. They, like Nero watching Rome burning, prefer to think that destruction is a prerequisite to a better society. Breyer dismisses the argument of excessive competition as "an empty box". (19) While he includes "shipping" in the category of industries that have used the excessive competition argument, Breyer omits to provide any basis for his disagreement in this particular case.

One might of course reason that costs incurred by excessive competition are simply the costs of exit of unwanted firms in an industry. In comparative statics this is the grey zone of what happens between time (t) and (t+1), the cost of improving market efficiency. Yet, an unpleasant possibility exists, namely that these costs are substantial and that they imply a major waste of resources. Further, if the exit of firms indeed takes place, there is a real possibility that the number of firms remaining in the industry will diminish, resulting in a less competitive market than before.

An example of this kind of simplified reasoning can be found in a report prepared by the Economic Council of Canada on U.S. Airline Deregulation. It somewhat innocently concludes that:

Carriers responded to the policy of fare liberalization and deregulation by offering lower levels of fares, wider fare structures and varied quality of service.

.....

The evidence is that rather than becoming concentrated between a few carriers, the industry is becoming less concentrated, competition on many routes has become intense, but there is no evidence of behaviour which could be described as destructive. (20)

The above statements have a certain "Alice in Wonderland" quality. It is unfortunate that the report makes no reference to the balance sheets of the airlines faced with this allegedly non-destructive competition. In fact, U.S. airlines are seeing their balance sheets being eroded by competition. (21) True, competition is not the only factor, but it certainly is a major one. If bankruptcy of a major airline known for its efficiency and low-cost services is not destructive or excessive, then what is? (22)

Excessive competition may be defined as one that wastes resources by low load factors (or low vessel or aircraft utilization), by unnecessary exit, and by raising unit costs of operations.

While U.S. regulation of transportation generally seeks to control transport rates and entry, the Shipping Act of 1916 controls rates only, while imposing free entry. In the words of one highly qualified observer, this unique situation in the annals of transportation has not failed to create difficulties.

Ocean shipping today is an exceedingly capital-intensive industry with high fixed costs. New building of fully cellular container ships can run upwards of \$75 million, and the costs of container inventories, shoreside facilities, and labor and operating expenses are on an ever-upward spiral.

In these circumstances, it is no wonder that liner operators are constantly seeking to rationalize their services via consortia, coordinated sailings, space charter agreements, pooling arrangements, and the like.

Only in the U.S. trades, where the "open" conference is mandated, are they significantly thwarted in these efforts. The reasons are readily identifiable: maritimes statutes that have not kept pace with the times, a Congress that until recently has been largely apathetic about shipping issues, a zealous Anti-trust Division at the U.S. Department of Justice doggedly seeking to intrude the Sherman Act ever deeper into ocean shipping and related intermodal transport matters, and a federal judiciary that has consistently tilted in the direction of narrowing the range of permissible collective action by liner operators.

The causal common threads running through these reasons are a priori thinking and ignorance of the complex interplay of commercial dictates and economic realities tending to make liner shipping a virtually unique transnational industry that does not fit the classic case-study mold or econometric model. (23)

The result of U.S. policies has been a fast turnover of liner companies, depressed earnings and higher rates. Liner conferences, far from possessing the monopoly power that the U.S. Justice Department claims to find (24), have seen their market power being steadily eroded over the years. (25)

The constraints on the exercise of economic power by conferences are of major importance in understanding why the market power of conferences has been weakening over the past two decades. It may be useful to present a summary of elements that limit the ability of conferences to monopolize trades. In the early 1950s, Daniel Marx, Jr. identified six major factors that constrain the "monopoly power" of conferences:

1. Intraconference competition;
2. Actual or potential competition from other lines, which may or may not intend to join the conference;
3. Alternative sources of supply or markets;
4. Actual or potential competition from tramps;
5. The bargaining strength of shippers; and
6. Government regulation or intervention. (26)

Intraconference competition

Although much has changed since the 1950s, the six points made by Marx, with some important additions, apply even more today. Intraconference competition has certainly not diminished since then. Containerization, introduced by innovative newcomers, has become solidly entrenched in the liner markets. Some existing companies have been forced out, while several foreign companies have formed dynamic consortia in order to maintain or enlarge their market shares. Lines have invested in modern terminals and provided transshipment services and inland connections.

Competition from other lines

Equally important is the actual or potential competition from nonconference lines, which has increased greatly over the past few years. Price cutting by independent lines has resulted in the near collapse of some conferences, with many members resigning from them. An example of an independent line which has carved out a major market share on an important Canadian trade route is Cast.

In many trades, vessels from Communist countries have taken a significant part of the traffic. Their participation in liner services gives reason for concern because of its unpredictable nature. When traffic levels are high, they may come in and "skim" the traffic, and then leave when the market is in a down-turn.

In addition to the Soviets, the People's Republic of China, Poland, and Yugoslavia have rapidly growing fleets. A number of Developing Nations have established substantial state-owned fleets, and others are in the process of doing so. Some of the newcomers have joined existing conferences and appear to have had relatively few difficulties in becoming members even of closed conferences. These newcomers, whether "insiders" or "outsiders", are exerting considerable pressure on liner companies by adding capacity at a rate faster than the various shipping markets are absorbing it.

Air freight

In his discussion of competition from nonconference lines, Marx mentioned (in a brief footnote) that competition from airlines should be taken into consideration "where passenger conferences are concerned." In retrospect, this comment has turned out to be a rather remarkable understatement.

Although it seems most unlikely that air transport will ever be able to drive the maritime freight conferences out of business as it did the passenger conferences, the role of air transport now most certainly deserves more than a footnote. For example, in 1975 airlines carried 27 percent of the value of U.S. trade transported by scheduled carriers (air freight and liner traffic). As air freight carries only about 2 percent of the tonnage carried on overseas scheduled services, it follows that air freight is "skimming" the most valuable - and highest paying - cargo. In 1975, U.S. transport companies generated total export freight earnings of approximately \$1.5 billion. Of this, 25 percent went to U.S. flag airlines and 75 percent to U.S. flag ocean carriers (primarily liner companies). (27)

Other sources of competition

The demand for ocean transport is derived from the demand for goods that must be transported across oceans. As freight rates increase, some importers and exporters will start searching for other market areas. Consequently, alternative sources of supply or markets can act as an effective constraint on the pricing policies of conferences. There can be no doubt that this factor is far more important today than twenty - or even ten - years ago, especially for manufactured goods, which play a large role in liner traffic.

In a not too distant past, the major exporters of manufactured goods could be found around the North Atlantic. But in recent years, a number of other suppliers, led by Japan, have entered this market. Taiwan, Korea and Brazil, with many others following, are rapidly expanding their exports of industrial goods, and this trend is likely to accelerate. As a result, many European and North American exporters have

experienced diminishing profit margins and are becoming more sensitive to freight rate levels. This increased price elasticity for transportation will further reduce the ability of conferences to raise their tariffs to offset increased costs.

Actual or potential competition from tramps affects primarily low-value cargo and commodities that are shipped in large quantities. Even the generally skeptical U.S. Department of Justice finds that tramp competition is "vigorous" in these cases. (28) Another study concluded that "... liners and irregular carriers are apparently good substitutes for each other." (29) Nonliner services play an overwhelming role in the foreign trade of the United States. In 1970, nonliner services carried 81 percent of American imports and 83 percent of exports. These figures exclude major bulk commodities. Also some relatively high-value commodities are transported by nonliner services when shipments are sufficiently large to make up full shiploads. Such "neobulk" services are expected to become even more important in the future, further increasing competition between liner services and tramps.

The emergence of active shipper intervention

In recent years, shippers and several governments have taken significant steps to strengthen the bargaining power of shippers. A series of eight UNCTAD reports published under the general title Protection of Shipper Interests reviews some developments in liner markets that will serve to protect shippers by increasing their bargaining position:

1. Shippers' councils;
2. Shipping investigation units;
3. Bulking cargoes;
4. Aggregation of liner cargoes;
5. National shipping lines; and
6. Technological development and multimodal transport. (30)

By mid-1976 shippers' councils had been established in twenty-three Developing Countries or territories and in twenty developed, market economy countries, including Canada. (31)

A number of additional councils were in the process of being formed. Forty-three countries with active shippers' councils represent an estimated two-thirds of world-wide loadings of liner cargo and minor bulk commodities. In addition, several countries have alternative monitoring systems, such as government regulation or state-trading arrangements. Countries with no overall monitoring of conference operations represent only 12 percent of liner and minor bulk transport.

The net result of the increasing role of shippers' councils and other developments referred to by UNCTAD has been to reduce the bargaining strength of conferences.

Intermodal transportation

A new transport dimension has been introduced into international markets since Marx identified the six previously cited constraints on conference power, namely that of intermodalism. Containerization has opened up new transport routes and brought conferences in separate geographic areas into direct competition with each other. It has also generated new competition between ocean carriers and land transportation. Intermodalism not only has had an impact on liner cost structures and investment, but also has affected conferences in numerous and often unpredictable ways. Containers

have blurred the distinction between various modes of transportation and the concept of the "inherent advantages" of each mode. Containers move door-to-door, transferring with relative ease from vessel to rail to truck and, in some cases, also to jumbo jets or barges. (32)

Minibridges and landbridges (integrated rail-ocean services) have provided shippers with new options concerning ports and ocean carriers. For instance, in 1977, there were eight lines or consortia providing all-water services to the Far East from U.S. Atlantic and Gulf ports. The number of individual lines involved was twelve. In addition, there were several break-bulk services available. Despite this, there were at least twelve carriers operating minibridge services via the West Coast. Consequently, the Far Eastern Freight Conference, covering the trades between U.S. Atlantic and Gulf ports and the Far East, found itself in direct competition with the Pacific West-bound Conference, operating out of the U.S. West Coast.

Minibridges are a good illustration of an important point: it is exceedingly difficult to identify relevant market areas when discussing liner and conference services. Intermodal services give inland shippers a large number of alternative ports through which to ship, and distinctions such as North or South Atlantic ports have lost much of their significance to shippers. Also Canadian ports provide a viable alternative for many U.S. shippers. For this reason, one report by the U.S. Maritime Administration on North Atlantic shipping options includes all ports from Florida to the St. Lawrence River ports as being potentially in competition with each other. (33)

Summary

Conferences have seen their market power being eroded for a number of reasons. The single most important factor may well be the introduction of containerized services and intermodal transportation. While in the past each port enjoyed a reasonable degree of monopoly within its traditional hinterland, today every port finds itself in competition with a greatly increased number of ports. This increased competition has opened new trade routes in North America, some of it to the advantage of Canada. In fact, while U.S. container traffic is stagnating, Canadian traffic is expanding, largely because of new opportunities provided by intermodalism to provide a shortcut for American traffic to Europe through Canadian ports. Such transit traffic is footloose, always seeking the most direct route and the least costly. Under such circumstances, it makes little sense to talk about the risk of any given conference monopolizing the trade.

Those who doubt the exposed position of liner services need only consider U.S. statistics on liner services. While liner vessels carried 22 percent of all dry cargo in U.S. trades in 1965, the percentage has declined steadily ever since. In 1975, market share was down to 14 percent. (34)

Liner services - whether operating under conference agreement or not - are not monopolistic. They are fighting an uphill battle, and should be provided whatever opportunity possible to rationalize their services. The alternative is consolidation through bankruptcy.

RATIONALIZATION OF LINER SERVICES

Given the economic structure of liner services and the competitive environment in which they operate, it does not make much sense to prescribe imposed "free competition" as a remedy. In fact, the result might be a major reduction of supply of useful and potentially economic services. The diminished supply would deprive small shippers

of low-value goods of liner services which would be reduced to a premium express service, only available to large shippers or shippers of high-value goods.

If one accepts that the liner industry is one where rationalization of services, i.e., higher productivity through increased vessel utilization, is more essential than the rather hypothetical increase in market efficiency that might result from free competition, it becomes essential to strive towards policies which will allow further improvement in vessel utilization. This is exactly what most nations that have high stakes in international trade of manufactured goods have attempted to achieve. In the following we shall give a summary of some of these policies and of studies of the economics effects of rationalization of liner services. (35)

The following is a summary of five studies on the potential savings resulting from rationalization of services. It is important to observe that these studies have been carried out by different groups, only one of which was associated with the liner industry. The remaining four were carried out by government agencies or independent academic researchers.

The Australian experience

Liner services constitute the lifeline of Australia's foreign trade, and it is not surprising that its government has always taken a strong interest in the economic health of the liner industry. The Australian Government actively encourages coordination of liner services, and its stated policy is to encourage maximum operating efficiency and watch carefully for any deviation from this objective. The Australian Government's belief that strong closed conferences running fully coordinated services are in the shipper's best interests has led it actively to stimulate greater rationalization of liner services, which is to say that in the case of liner services it has deliberately chosen production efficiency over market efficiency.

This choice was based on in-depth studies of the liner industry. One such study was the so-called Western Exercise, prepared by the staff of the Australian Department of Trade and Industry in the early 1960s. The objective of that exercise was to show how liner services could in fact be rationalized and to quantify the economic benefits that would result. The study clearly demonstrated the obvious but often overlooked point that, in the case of liner shipping, cost levels are directly related to capacity utilization.

The study concludes that the proposed rationalized schedule would result in annual saving of £6.2 million on estimated freight earnings of £52 million. In addition, a reduction of capital invested in vessels would be possible as fewer ships would be needed. The calculated replacement value of vessels actually in the trade in 1963-64 was £155 million against £140 million for the fleet needed if the proposed rationalization was implemented. These savings would permit an 11.9 percent general reduction in freight rates for both directions.

The study did have considerable impact on the trade. By demonstrating the support of the Australian Government for rationalization, it greatly facilitated the introduction of rationalized services in 1966. The number of port calls was reduced. Voyage times consequently were shortened and the number of vessels in the trade was reduced from ninety-six to seventy-nine. Higher load factors increased the revenue-earning ability per ship, while costs were reduced.

The North Atlantic Pool

In November of 1971, shipowners operating container services between the U.S.

East Coast and Europe proposed a pooling agreement before the Federal Maritime Commission. Estimates for the proposed North Atlantic Pool show that \$22 million in fixed costs could have been saved in 1970, or about 22 percent of fixed costs, if load factors were raised to 85 percent from the actual 65.8 percent.

The U.S. Maritime Administration submitted cost statistics during the pool proceedings showing that increasing load factors from 60 and 80 percent would reduce costs per TEU by 15 percent or by roughly \$100 for a twenty-foot container.

Unfortunately, although the pool was deemed approvable by the Administrative Law Judge in December of 1973, it was never implemented because of changed market conditions during the long period of regulatory delay.

U.S. Maritime Administration fuel study

A marine fuel conservation study, sponsored by the U.S. Maritime Administration, on the possible effect of rationalization of North Atlantic container services concluded that fuel consumption could have been cut by 50 percent in 1974-75 with a saving of \$30 million.

These results, which were obtained by computer simulation, are based on a scenario combining slower vessel speed and fewer port calls per voyage with fully coordinated services. Costs other than fuel costs were estimated to remain largely unchanged. Hence the \$30 million figure would be a net dollar saving. As the objective of the study was to minimize fuel consumption, not to minimize fleet costs, it did not pretend to have arrived at a least cost solution. The \$30 million savings could be further increased if the objective was to minimize total costs. The range of possible savings would be in the order of 10 percent even assuming no change in vessel types.

Hapag-Lloyd

A most interesting study prepared by Hapag-Lloyd was based on actual cost data and trade flows throughout the analysis, and in our opinion its assumptions are generally conservative and realistic.

It concludes that raising the load factor by means of coordination from 68 to 85 percent in 1975 could have resulted in saving slightly over \$200 million or nearly 28 percent. This is very close to the estimate of Devanney et al., whose results are presented below.

Devanney

Devanney is strongly opposed to any form of conference agreement and particularly those prevailing in U.S. trades, but primarily because he believes they are unable to achieve rationalization of services. His report refers to liner services between the East Coast of the United States and the West Coast of South America in the early 1970s. At that time, the aggregate freight bill for this market was calculated to be near \$150 million. While the trade was served by 25 relatively small ships, it is estimated that eight larger vessels would be sufficient to serve the trade, and that the freight rate in this case could be reduced by 28.5 percent compared to that required under the old system using 25 ships. (36)

The paradox is that while Devanney and his coauthors are generally against

conferences on theoretical grounds, they at the same time conclude that if conferences are to exist they be as strong as possible:

... a closed conference - one in which supply is regulated - is likely to be more efficient than an open one. A conference which practises control over scheduling is likely to be more efficient than one that does not; one that practises cargo pooling still more efficient; and one that practises revenue pooling more efficient yet. In short, the closer the conference becomes to an outright monopoly the more efficient it is likely to be. In the industry, this process is generally called rationalisation (emphasis in original). (37)

Summary

The above studies all suggest that coordination of liner services can generate substantial savings. The estimates cover a wide but consistent range: 11.9 percent in the Australian case, 15 percent in the North Atlantic Pool case, about 10 percent in the Marad fuel study, 28 percent in the Hapag-Lloyd study and finally 28.5 percent in the Devanney study.

It is important to note that the last two figures of close to 30 percent refer to cases where rationalization would be achieved through the use of vessels specifically adapted to the needs of the trade, while in the other cases it was assumed the vessel types would remain unchanged. This suggests that reasonable short-term estimates of the benefits of rationalization are in the range of ten to fifteen percent whereas over a slightly longer period (which could be as short as one or two years), savings of thirty percent are possible, even realistic.

CONCLUSIONS

While the United States supports its liner fleet with operating and construction subsidies as well as by various other means (38), it at the same time burdens it with regulatory practices that severely hamper its competitiveness. Seaton, president of APL, has recently commented that:

No other country restricts its domestic flag fleet with legal and administrative inhibitions like the U.S. Many things are prohibited in the U.S., but not in other countries such as the anti-trust laws [sic], shippers' councils, rebates, rationalisation and bilateral agreements. (39)

According to another observer, U.S. liner operators have become

"the pawns in the battle between the Department of Justice on the one hand and clear congressional policy set forth in the Shipping Act of 1916 on the other." (40)

One consequence of the continued intervention of the Department of Justice in matters that one would think rightfully fall under the jurisdiction of the Federal Maritime Commission, has been to prevent U.S. operators from forming the kind of consortia of liner companies that are common in the Far East and Europe.

Additionally, endless litigation over intermodal rates - accepted as a matter of course in other countries - has in the United States been "a time-consuming,

expensive and generally irritating process for all concerned." (41) In short, U.S. regulation has prevented liner companies serving American trade routes from adjusting fully to the new economies of scale made possible by the introduction of containerized liner transport in the mid-1960s.

As the above quotes show, we are not alone in criticizing U.S. policies with respect to liner shipping. Of course, such quotes might be dismissed as partisan, self-serving pronouncements from industry services. It may therefore be of interest to include to quote a well-known, independent expert:

.... the ways in which the United States attempts to regulate liner shipping are actively harmful, in that they impede, delay, and raise the costs of the ordinary conduct of trade and that they create conflicts of jurisdiction with other countries (Emphasis added). (42)

These are strong words, indeed, coming from a Senior British Civil Servant, but not unreasonable in view of that fact that in the United States, prosecution under anti-trust laws leads to criminal charges, rather than the civil charges common in Europe.

When the United States apparently prefers to spend taxpayers' money on subsidies, while at the same time - in the name of free competition - it imposes a regulatory system on shipowners in U.S. trades preventing them from operating efficiently, one may perhaps be forgiven for having previously referred to this system as being schizophrenic.

An official British Government report suggests that the U.S. system of open conferences may suffer from severe flaws:

..... the "open" conference appears least likely to serve the interests of shippers. It is also least likely to serve that of shipowners; in their evidence to us they agreed that such a conference arrangement typically resulted in low load factors, low profits, and rising freight rates. (43)

It is noteworthy that the open conference is found to be the least desirable for shipowners and shippers alike. By contrast, the same report came out strongly in favour of the strongest conference form:

The "closed" conference with fully rationalised sailings therefore appears to us most likely to serve the best interests of both shippers and shipowners. We appreciate that we have here come to a different conclusion from those reached by some others who have studied conference arrangements; we believe that they may have given too little weight to the full range of the needs of shippers and to the practical results of unrestricted competition in all fields other than price. We identify the opportunity for providing a planned systematic series of sailings as the feature of shipping conferences which is potentially most beneficial. The full exploitation of that opportunity requires a "closed" conference. (44)

The last quote is significant to the question at hand in that it stresses rationalization of sailings as the potentially most beneficial aspect of liner conferences. In fact, the only conference form that can unequivocally be demonstrated to be socially beneficial is that which through rationalization achieves significant increases in productivity.

Therefore, the fundamental reason that conferences are generally encouraged by most countries, is their role in assuring the availability of liner tonnage, offered at rates based on efficient, coordinated operations.

To dispell any doubts about the isolation of the United States within the world community in matters of liner conferences, it may be useful to listen to the voice of UNCTAD, a dedicated spokesman for the Less Developed Nations. According to UNCTAD, a Less Developed Country is faced with two basic options in the matter of liner transport:

It can either encourage competition by non-conference liner operators in the expectation that they will undercut conference rates, or it can press shipowners and shippers to rationalize and so aim to reduce rates by reducing the overall cost of the service. The principles underlying these alternatives are fundamentally different: increased competition by non-conference liner services will make the overall liner trade less rational and may make it more costly (by increasing over-tonnaging, duplication of sailings, and fragmentation of the overall cargo movement), while rationalization will inevitably involve increased restrictions on competition, since it cannot be implemented satisfactorily unless shippers adhere to their conference loyalty agreements. (Emphasis added). (45)

While UNCTAD does not, in the above cited document, take any clear position as to which of the two alternatives is to be preferred, it does suggest that rationalization, implying closed conferences and strong loyalty agreements, combined with an efficient organization of shippers, meaning an effective use of shippers' combined bargaining strength, under certain conditions "may be much more effective than the traditional form of competition."

Questions of technical efficiency are - and must be of the greatest concern to anyone who seriously wants to seek improvements in the liner services. Commenting on rationalization UNCTAD observes:

The introduction of a rationalization scheme can be expected to lead to a direct reduction in the costs of a liner service and hence increase its availability; the question is whether those cost savings will result in rate reductions for shippers ... (Emphasis added).

.... rationalization, in itself, acts on the costs, rather than on the profits, of the conference carriers. (Emphasis in original). (46)

The interesting aspect of rationalization is its potential for rate reductions based on real cost reductions. These are not idle theories, but principles that have been tested and proved in the market place.

It is of interest to note that the much debated UNCTAD Code of Conduct for Liner Conferences comes out in favor of strong conferences, i.e., conferences that would not be acceptable in U.S. trades. In fact, the first three objectives of the Code all relate to efficiency of liner operations:

1. Orderly expansion of world seaborne trade;

2. Development of regular and efficient liner services VIII-19 adequate to the requirements of the trade concerned;
3. A balance of interests between suppliers and users of liner shipping services. (47)

In this general form the UNCTAD Code can almost be seen as a summary of Australian conference policies to which we have referred previously in our discussion of the Westerman Exercise. The reference (in 2 above) to efficient liner services adequate to the requirements of the trade, implies a balancing of supply and demand through some form of rationalization of services.

It should be mentioned that in Geneva on April 6, 1974, seventy-two countries voted in favour of the Code. While several countries abstained (including Canada), only seven countries voted against the Code: Denmark, Finland, Norway, Sweden, Switzerland, the United Kingdom and the United States. Of these, only the United States was against the notion of strong conferences. The others were primarily concerned that their liner fleets might be excluded from cross-trading.

Therefore the vote in Geneva strongly suggests that the majority of nations favour an orderly, rationalized liner industry.

What, in the final analysis, is the cost of U.S. regulatory practices with respect to liner conferences? Some of the costs cannot be estimated, such as unnecessary conflicts and litigation with primary trade partners. (48) More immediate results can be obtained from looking at available figures for vessel utilization. Based on such figures, we calculate that present U.S. regulatory practices with respect to liner services impose unnecessary costs of more than \$1 billion using 1975 figures. By 1985 these additional costs could exceed \$2 billion annually (49). This is a heavy price to pay in the name of free competition.

In the midst of the liner conference controversy, Canada has maintained a rather neutral position. This may be the time for Canada to take a clear stand in this question. Canada's Shipping Conferences Exemption Act of 1979 has as its specific objective "to exempt certain shipping conference practices from the provisions of the Combines Investigations Act". (50) The Act ceases to be in force on March 31, 1984 unless prolonged. We hope that in this case, Canada will not follow the example of its neighbor to the South (as it appears inclined to do in the area of airline transport - at its own peril). Rather, we would hope that Canada, as the great trader it is, would be ready to learn from the mistakes of its neighbor, and to provide new leadership.

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