An Economic Analysis and Study of the Ocean Liner Shipping Industry in Response to the Ocean Shipping Reform Act of 1998

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ABSTRACT

The purpose of this paper is to determine how small, medium and large shippers react to changes in the ocean-liner shipping industry under the Ocean Shipping Reform Act (OSRA) of 1998. The focus is on the importance of negotiating contracts with carriers and the choice to use either a shipper's own leverage or the leverage of a third-party agent. I hypothesize that large shippers wi11 be more supportive of OSRA when negotiating favorable rates than small shippers. Data were collected from a wide variety of companies that ship from Pacific Coast ports to Asia. Our analysis implies that OSRA forces shippers to rely on their own clout or that of a third-party agent to gain desirable service contracts. Finally, the research describes desirable shipments from the perspectives of both carriers and the shippers.

INTRODUCTION

The Ocean Shipping Reform Act (OSRA) of 1998, PL# 105-258[2] went into effect in May 1999. The intention behind OSRA was to open market interactions by relying on the supply and demand of carriers and shippers. This resulted in promoting a competitive market in the shipping industry. This paper explores the open market interaction culture that has increased the importance of negotiating service contracts in the shipping industry.

Before OSRA, the Federal Maritime Commission[3] regulated the ocean-liner shipping industry. Service contracts were determined by published tariff rates under contracts that were open to the public. The published service contracts included the lane, rate, volume and length of contracts. Theses policies were created to assure that smaller shippers were not discriminated against by carriers who wanted to deal only with large volume shippers. There were also “me too” service contracts which required carriers to give the same service contracts to shippers with similar shipments. This allowed small shippers to use the same contracts that the big shippers were able to negotiate.

OSRA has created a deregulated environment in the shipping industry. A shipping company in Washington said that deregulation allows them to negotiate the best contract with the carrier based on their own market clout.[4] A fruit company in California,[5] which shipped to

[2] The United States Department of Transportation’s Maritime Adminis tration (MARAD)
[3] United States Department of Agriculture (USDA) Agriculture Marketing Services
[4] The Federal Maritime Commission (FMC), a division of the United States Department of Transportation
[5] Personal interview with a Company’s Transportation Manag er

countries in Asia, said that the new law has caused them to put more money in the negotiating side of business. They expressed that they feel they are now in the business of selling freight instead of fruit.

A major provision of OSRA regarding rate negotiations allows carriers to engage in confidential contracting and annuls common carriage service contracts. The terms of service contracts need to be filed with the Federal Maritime Commission, but that information is not made public. Also, service contracts under OSRA do not allow "me too" service contracts. With the new confidentiality, shippers under the new regulation system and third-party agent's negotiations become more critical in getting the best contract length, price and service.

With this new environment, we argue that shippers of large volume, recurrent lots are more likely to get favorable rates and service from the carriers (Pirrong, 1993). Thus, large shippers are more likely to negotiate favorable contracts in the OSRA environment. On the other hand, in order for small and medium sized shippers to ship under favorable rates and services, we suggest that they must use third-party agents who will consolidate sporadic shipments into large volume, recurrent lots. In this way they gain the leverage needed to negotiate effectively with the carriers.

RESEARCH QUESTION

OSRA promotes a market environment in which carriers and shippers must negotiate rates and services (Pirrong, 1992). In order to maximize profits, carriers will strive to fill their vessels to capacity to attract large-volume, recurrent shipments. To do this, carriers might want to offer rate discounts for large-volume and/or recurrent service. It is reasonable to expect that shippers with these desirable transportation demand characteristics are large shippers. Thus, small, irregular and infrequent shippers will be less desirable to carriers. Hence, carriers will be less willing to offer rate discounts to small shippers.

Given the above, we can expect that OSRA will promote rate and service negotiations between shippers and carriers. Specifically, large shippers should be more successful at negotiating favorable rates than small and medium-sized shippers. Therefore, large shippers should have a favorable attitude toward OSRA. With this study I hope to determine the characteristics of the shippers that match the types of predicted rates and observable services.

METHODOLOGY

First, we used an economic analysis to predict the patterns of rates and services that are likely to emerge when carriers and shippers negotiate service contracts (Clyde and Reitzes, 1998). The carrier's job is to provide a vessel to transport products from point A to point B. The carrier's profit depends on the ability to fill its vessels to full capacity. The average cost of shipping a container is lower if the vessel is billed than if it was partially billed. Thus, carriers can utilize these economies of scale to offer rate discounts to attract large-volume shipments.

We concluded that carriers would rather have a few big shippers with long term contracts to fill their vessels than many small shippers with short or long-term contracts (Sjostrom, 1989). Profit motives lead us to this conclusion since carriers who sign long-term contracts with a large volume are guaranteeing themselves business for an extended period of time. This allows them to budget their cost effectively and efficiently. Long-term contracts reduce the number of times a carrier must seek out shippers and negotiate contracts. This lowers transaction costs. Carriers incur a range of other costs such as the vessel, fuel, and crew. These costs can be affixed to each of the voyages, so when there is a long-term contract, the transaction costs are minimized over a number of voyages. The lowered transaction costs over time allow carriers to offer shippers lower rates when they sign long-term service contracts. In order for small and medium shippers to obtain lower rates they need to provide desirable shipments to the carriers as well. So their optimal choice is to band together and consolidate their shipments into larger, more frequent lots. In this way they provide a large shipment that can be serviced under a long-term contract.

Second, we collected data to determine whether our economic analysis was supported by the facts. We surveyed companies on the Pacific Coast who were shipping on the Trans-Pacific shipping route to Asian countries on the mainland and the islands (See Appendix A). We consulted with representatives of eighty-three companies that ship the following products: dried fruits and vegetables, fresh fruits and vegetables, forestry products, processed foods, and meat and poultry.

ANALYSIS

Our first objective in the survey was to determine company attitudes toward OSRA. The support for OSRA seems to be muddled. Many felt that the Reform Act did not do all it was supposed to do. For example, some respondents did not feel the Reform Act created a more competitive market. Others felt the Reform Act required more time and effort to negotiate rate and service contracts than is efficient.

Tables 1 and 2 illustrate the support and opposition to OSRA (those interviewed that were not familiar with OSRA were not included in this data). The support for OSRA seems to be muddled and the opposition for OSRA is slightly higher among the small and medium shippers. From the interviews, many large shippers were knowledgeable about OSRA, but felt it was too limiting to hurt their business and contracting methods. However, they did not oppose the law. They were just unsure of its impacts. On the other hand, small and medium shippers opposed the Reform Act because is removed common carriage and required that more time be diverted to rate negotiating.

Table 1. Percentage of shippers in each class that support OSRA

Size	Percent
Small	33%
Medium	52%
Large	35%
Very Large	100%

Since we concluded that carriers desired large volume and recurrent lots under a long-term contract, we asked who was signing long term contracts and what benefits they saw in this choice. Table 3 shows that large shippers are more likely to sign long-term service contracts, while small and medium sized shippers are less likely to sign.

The most common benefit the interview participants shared by signing the long-term contracts was the ability to plan ahead for costs and profits. Other benefits that were revealed from the interviews were the strong relationships with carriers that can be built and having consistency of service with carriers.

Table 2. Percentage of shippers in each class that oppose OSRA

Size	Percent
Small	11%
Medium	13%
Large	6%
Very Large	0%

Table 3. The percent of size and type of shippers who sign long term service contracts

	Regular Shipments	Irregular Shipments
Small	27%	0%
Medium	35%	0%
Large	47%	
Very Large	100%	

Next, we wanted to determine which companies felt that they had their own leverage in negotiating rates. The findings in Table 4 support the conclusion from our economic analysis. That is, large shippers are more likely to rely on their own leverage in negotiating with carriers (Gooding and Neel, 1997). The data also reveal that small and medium shippers do not rely on themselves for leverage. The interview participants shared that they are able to negotiate on their own clout because they are big enough to fill vessels with large-volume, recurrent lots. Small and medium shippers who cannot rely on themselves must rely on the clout of third party agents to get reasonable rates for service with the carriers. The third-party agents consolidate shipments to create large volume, recurrent lots. This allows their customers to compete with the large shippers with large volume and recurrent lots to acquire the same long-term service contracts with comparable rates. The third-party agents may or may not do the rate negotiating for their customers. However, the rate negotiating third-party agents have gained has increased the popularity of OSRA stipulations.

Our research revealed two types of third party agents: freight forwarders and shippers' associations.[6] It is clear that small and medium shippers with irregular and regular shipments need to work with third-party agents to adequately compete with large shippers with large volumes and recurrent lots. A shippers' choice for a third-party agent is uncertain since there are both advantages and disadvantages in either choice.

Before OSRA, the freight forwarders initial responsibilities were simply logistical matters. Their tasks included booking space with a carrier, attaining export clearance, arranging for products to be containerized, completing export documentation, assembling cargo insurance, advising on domestic and foreign regulations, and contributing assistance on labeling, marking and packaging for the shipper. Many shippers have strong connection with their freight

[6] United States Department of Agriculture (USDA) Agriculture Marketing Services

forwarders because of the variety of personalized tasks the freight forwarders offer their customers. Many shippers distinguish their relationship as a partnership more than a customer relationship.

Table 4. Percent of size and type of shippers who use their own leverage in negotiating rates

	Regular Shipments	Irregular Shipments
Small	27%	0%
Medium	35%	0%
Large	47%	
Very Large	100%	

With OSRA's provisions on confidential service contracts and the termination of common carriage service contracts, the roles of third party agents in negotiating service contracts have become more valuable. Along with the many duties freight forwarders present, many are getting more involved in rate negotiating. The freight forwarders use their influence to generate a service contract that the shipper cannot get on their own. The leverage a freight forwarder is derived from its contracts, experience, reputation, and large volume shipments. Rate negotiation has become a time-intensive job with the extensive facilitation that has to be done with carriers.

Table 5. Percent of shippers who were using freight forwarders for their leverage

Size	Percent
Small	48%
Medium	32%
Large	0%
Very Large	0%

Compensation for freight forwarders comes from a previously agreed upon amount, documentation charges, and a percent of the ocean freight rate. From the interviews with the company managers and transportation specialists, I found that all types of shippers, both small and large, commonly used freight forwarders. The difference came when the duties of the freight forwarders were discussed in detail. As seen in Table 5, small and medium shippers were more likely to use them to leverage lower freight rates. Nearly all of the shippers interviewed used them for documentation, paperwork, and keeping them up with the rules and regulations of the ocean liner shipping industry.

The other popular reported intermediary for those interviewed were the shippers' associations (Mongelluzo, 2000). Shippers' associations are generally non-profit cooperatives. They are organized by a group of individual shippers who pool their cargo together and collectively negotiate with carriers. Generally, shippers' associations are large enough to compete and effectively administer the best service contract possible for their membership. The shippers' associations sign the service contracts, and all of the members have access to those contracts. Different shippers' associations provide a different range of services for their membership. "Full-Service" associations, take possession of their member's cargo, take care of logistic matters and handle rate negotiations. Another type of shippers' association is the "Rate Negotiator." This type of association handles negotiating service contracts solely for their membership. Their primary responsibility is to provide the best service contract for their membership.

Table 6. Percent of size and type of shippers that use shipper's associations

	Regular Shipments	**Irregular Shipments**
Small	45%	19%
Medium	23%	60%
Large	29%	
Very Large	0%	

Table 6 shows that as we expected, small and medium size shipper are more likely to rely on shippers' associations. Since the shippers' associations give them the volume leverage to compete with the large shippers they are most useful to the small and medium shippers. Members are not required to use the association's logistical help; they can use freight forwarders for this type of service or their own staff. Many shippers used an intermediary for this type of work, small or large.

Since shippers' associations are non-profit organizations they do not necessarily receive compensation. They can recover their costs in two ways: 1) either charges a markup on each container shipped; or, 2) charge each member a flat administration fee such as dues or registration fees.

CONCLUSION

OSRA has created an environment for market forces to drive the shipping industry freight rates. Thus, rate-negotiating tactics have increased in importance (Neel and Gooding, 1996). This now necessary negotiation contest has and will continue to change the shipping industry. If the small and medium shippers want to be players, they must rely on their own clout for leverage or rely on the clout and leverage of third-party agents. The carriers will continue to be looking for long-term contracts with large volumes and recurrent lots. When a shipper and carrier are both able to make use of economies of scale they have the advantage of obtaining lower costs per container.

Shippers who choose to use their own leverage will need to have the desirable shipments, of large volume and recurrent lots to attract formidable service contracts with carriers. Our survey showed that those that were able to negotiate on their own generally shipped sufficient volumes. We claim that such shippers possesses the leverage necessary to obtain rates lower than those offered by the carriers.

If shippers choose to go with third party agents they are able to rely on the leverage of others to stay competitive and effective in the market. Our findings suggest that those using third-party agents needed them for their consolidation tactics and for several other reasons. For example, many used an intermediary because of their experience. Small and medium shippers that ship small and irregular shipments often lack the experience needed to negotiate with carriers. The shippers also needed them because of they lacked the personnel to deal with the shipping aspects of their businesses.

The predictions were supported by the real-world data collected through the survey. I found that under the new provisions of OSRA, large shippers are in a better position to negotiate fair and reasonable service contracts because they shipping in large volume and recurrent lots. In service contracts, small and medium shippers were subjected to dealing through third-party agents for their clout. Those using the third-party agents were very happy with their services and did not feel that they were being directly harmed by this added step. Small and medium shippers do feel that OSRA will be a threat to their long-term business, but with the growing strengths of freight forwarders and shippers' associations they will survive the governmental policies of OSRA.

REFERENCES

Mongelluzzo, B. 2000. NCBFAA Shippers Association enters the fray. The Journal of Commerce.

Neel, R. and Gooding, C. 1996. Proposed ocean shipping reform act's likely effects on conferences and rates. International Advances in Economic Research, 2, 4, 477-483.

Neel, R. and Gooding, C. 1997. Service contracts, rate discounting, and the future of shipping conferences. International Advances in Economic Research, 3, 4, 388-394.

Pirrong, S. C. 1993. Contracting practices in bulk shipping markets: a transaction cost explanation. Journal of Law and Economics XXXVI.

Sjostrom, W. 1989. Collusion in ocean shipping: a test of monopoly and empty core models. Journal of Political Economy, 97, 5, 1160-1179.

Williamson, O. E. 1979. Transaction-cost economics: the governance of contractual relations. Journal of Law and Economics XXII, 2, 233-261.

APPENDIX

SURVEY

Company: ____________________________________ Product(s): ____________________________

Company ships dry, reefer or both. (Circle which)

Company is an exporter, importer, or both. (Circle which)

Do you support OSRA?

____Very much
____Unsure
____Not at all

Have you changed the way you handle exports/imports to Asia in response to OSRA?
If yes, how?

Do you belong to a shippers' association for the purpose of handling exports or imports between the United States and Asia?

(i) Do you use an association?

a. When did you join?

(ii) If not using an association,

a. Are you a member of an association? If yes, why don't you use it?

b. Do you know what a shippers' association is?

c. Have you ever contacted a shippers' association? If yes, why didn't you join?

Do you use long-term or short-term contracts? List two reasons why you select a contract of this length.

(i) If preferred length is short-term, do you worry about transactions costs?

(ii) If preferred length is long-term, would you change your mind if the freight rate were the same regardless of contract length?

Please complete the following chart:

Column One: What goods do you ship to (from) Asia?

Column Two: How many containers (TEU) do you ship between the U.S. and Asia annually?

Column Three: How "regularly" do you ship each of these goods?

1=Only irregularly
2=Seasonally, from ____________ to ____________
3=Monthly
4=Weekly

Column Four: Do you use an intermediary (other than a shippers association, if using an association) for shipping any of these goods?

If yes, what kind do you use for each of these lanes?

1=Freight Forwarder
2=NVOCC

Good	**Volume**	**Regularity**	**Intermediary**

Imagine that you or your intermediary approached a carrier and tried to leverage them for a lower freight rate, do you think the carrier would budge?

Why or why not?

What carrier do you most frequently use?