

# **Revisiting ocean liner shipping: is the core still empty?**

Drew Stapleton, Ph.D. [Astapleton@uwlax.edu](mailto:Astapleton@uwlax.edu)  
University of Wisconsin La Crosse

**I review ocean liner shipping 16 years post OSRA and discuss the implications on pricing and container supply management in light of an empty core. Game theoretical implications are examined.**

**Keywords:** Empty core, Game Theory, Ocean shipping

## **Introduction**

In markets with avoidable fixed costs, the core may be empty and the reason for collusion may be to impose an equilibrium where none exists (Sjostrom 1989). The containerized ocean shipping industry has long been characterized by avoidable fixed costs and an empty core, and cartel-pricing. The Ocean Shipping Deregulation Act (e.g., OSRA) of 1998 was enacted, in part, to allow ocean shipping to act more and more like a free market (Stapleton and Ghosh 1999) where price and quantities were determined by the machinations of supply and demand curves, and not by cartel price setting. Sixteen years on, I argue that the core remains empty.

## **The Coase Theorem**

The Coase theorem is based on the neoclassical paradigm and argues that in the absence of transaction costs resource allocation is neutral with respect to liability rules. In a two-participant case, the core is always non-empty. Some argue that the Coase theorem does not always hold true in markets with greater than two players (see Aivazian and Callen 1981). The Coase theorem, based heavily in mathematical economics and explained fervently via Game Theory,

## **The Empty Core and Collusion**

Pricing in ocean shipping is determined largely by the cartel (referred to as conferences in ocean shipping) Stapleton et al, (2002), and called “monopolizing cartels” by most economists. The carriers are given anti-trust immunity to discuss and set pricing with members of their conference, say the Trans-Pacific trade lanes, for instance. At the end of a given year, the carriers get together to set rates based on expected volume and desired revenues. Prior to OSRA, the quid pro quo for the government to allow price setting was a requisite that the carriers recognized and honored “similarly situated shipper” status and offered “me-too rates”. For instance, if Nike negotiated a \$2200/TEU price, any similarly situated shipper (e.g., any shoe manufacturer) could get the same rate, regardless of volume. How did the similarly situated shipper know the rates? Because

there was a requirement for the carriers and shippers to post their rates and contractual arrangements in the *Journal of Commerce*, and later, on the world wide web.

The Ocean Shipping Reform Act eliminated this requisite, amongst many provisions, and enabled shippers to negotiate their own pricing without the need to make the terms and conditions public. However, carriers were still allowed to operate as conferences/cartels, and talk about and set pricing with their competitors (Stapleton et al 2002). Sjostrom (2004) offers keen insight in comparing monopolizing cartels and destructive competition models and discusses the profitability and efficiency of the conferences in a deregulated era. The key concern now is that even after a century and a half of liner shipping in conferences/cartels, and further operating in a deregulated environment, the core is still empty. That is, even though a major thrust of deregulation (i.e, OSRA) was to enable the containerized ocean shipping industry to act more and more like a free market where price was determined by supply and demand, the core remains empty.

Sjostrom (1989, 2004) tested competing models of empty core versus cartel theory and concluded that the theory of the core's explanation of the conference system is best. This research argues that the core remains empty, despite regulators' attempts at forcing the industry to act like a free market.

## **Bibliography**

Aivazian, V. A., & Callen, J. L. (1981). The Coase theorem and the empty core. *Journal of Law and Economics*, 175-181.

Coase, R. H. (1981). The Coase theorem and the empty core: a comment. *Journal of Law and Economics*, 183-187.

Sjostrom, William (1989) "Collusion in ocean shipping: a test of monopoly and empty core models," *Journal of Political Economy*, Vol. 97, No. 5 (October, 1989), 1160-1179.

Sjostrom, W. (2004). Ocean shipping cartels: A survey. *Review of Network Economics*, 3(2).

Stapleton, Drew and Soumen Ghosh (1999), "The Ocean Shipping Reform Act: Practical Implications for Both Buyers and Sellers," *Journal of Transportation Law, Logistics, and Policy*, Vol. 67, (NO. 1), Autumn 1999, 53-68.

Stapleton, Drew, Dave Becker, Rob Palmberg, and Brian Treadway (2002) "The Empty Core and the Allocation of Fixed and Variable Costs in the Containerized Maritime Shipping Industry," *Journal of Transportation Law, Logistics, and Policy*, Summer 2002, Vol. 68-69 (3-4, 1-2-3), 280-289.