



BRIDGE

September 2018 3rd Edition

Container Inventory Management: should the Present Practices be Regulated



Dr. Lalith Edirisinghe

Containers can transport cargo efficiently over long distances and facilitate multimodal transport without intermediate reloading at any mid points. According to alphaliner.com, (2018) there are 5,295 fully cellular ships that could carry 22.1 Million TEU and the World Shipping Council, (2017) reports 34.5 Million TEU of containers according to their data available as of 2013. Budgetshippingcontainers.co.uk, (2016) estimates a total 43 million Shipping Containers or around 72 Million TEU as at 2016. However, there is no standard container inventory management system in the global shipping industry at present. This leads

to extended idle time of empty containers at storage resulting substantial cost and frequent breakdown in global container supply chain. Container carriers exercise (in isolation) various mechanisms to manage their container inventories efficiently and effectively but, usually these approaches are exclusive to each carrier. The most popular practice is the repositioning of empty containers from the idle location to other locations where they are in demand. Most research have focused on carrying out this task in most effective and efficient manner. Therefore, majority of literature pertaining to container inventory management (CIM) relate to empty container repositioning. However, this is purely a reactive measure and not proactive. The maximum “utilisation” of inventories can be achieved if containers are on consistent move with freighted cargo. However, containers remain for about half the time of their lifetime being idle as they are either being maintained, repaired or in storage. Therefore, core issue prevails in the industry is to find the best method to optimize the CIM strategies and practices. The objective of this paper is to propose key concepts that influence effective and efficient CIM strategies/practices that help minimise the cost of container inventory management. This paper introduces five phenomenon namely, Pricing; Forecasting; Operations; Collaboration; and Customer care. According to the overall analysis two components namely, “Customer attrition” and “Cost of port handling” are the key contributors to the CIM strategies. It also proposes a new strategy namely, collaboration that basically leads to container interchange between carriers. The opinion towards collaboration among carriers is proposed as an effective solution to empty container problem in this paper which is not practiced by carriers at present. Container interchange is one of operative outcomes of collaboration between carriers. The proposed systems do not devalue the efforts of individual carriers’ efforts in managing their containers inventories, but it rather complements the present practices and synergise carriers’ efforts.

Container inventory management (CIM) is a very sensitive matter for container carriers. Efficient and effective management of empty containers (Song & Carter, 2009) and empty container (MTY) repositioning is a critical issue (Dong, et al., 2013) in the liner shipping industry. Ineffective CIM creates economic loss and marketing disadvantages to the shipping industry. On the other hand, the container inventories that is required by carriers (box-to-slot ratio) cater to exporters’ demand can be reduced if they manage their container inventories effectively and efficiently. Container inventory imbalance is an inevitable phenomena due to volatile trading patterns in the world. Since shipping is a derived demand of the international trading container carriers cannot escape from the said market realities. Finally, it represents a substantial cost amounting to twenty two percent in the overall cost structure of containers. Empty containers not only create an economic effect, but it also has an environmental impact (Song & Carter, 2009) because the ever-increasing empty container movements will also increase fuel consumption, congestion and emissions thus the pressure being placed on the shipping industry over carbon emissions (BMI, 2012). The growing imbalance of containers globally creates a substantial additional expense as well as environmental issues. Leading carriers have already implemented Container Imbalance Surcharge adding a direct cost to the consumer. Maersk Line (Maersk Line, 2006) advised their customers that the Equipment Imbalance Surcharge was implemented due to an increasingly severe equipment imbalance at Toronto container yards, leading to significantly