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Minimizing the Global Container Inventory Imbalance through Collaboration among Carriers

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Objectives

Container Shipping Lines (CSL) face serious challenges due to container inventory imbalance caused by the variations of worldwide trade distribution patterns. A balanced inventory may realise only when the exporters' demand for containers are equal to the laden containers imported into the country which is very unlikely given the above circumstances. Many CSL pool ship space (slots) in order to achieve the economies of scale advantages but do not pool their containers and interchange. The primary objective of the research is to evaluate the feasibility of sharing of containers between carriers as a solution to container imbalance issue.

Other objectives include,

- to identify the factors that influence the Container Shipping Lines with respect to container sharing (interchange)
- to understand as to what extent these factors can be controlled in order to derive best combination
- to recommend efficient and effective mechanism to minimize negative impact of container imbalance

Data & Methodology

An opinion survey conducted using 110 shipping agents out of 135 members of Ceylon Association of Ships Agents-Sri Lanka. The major decisions with respect to containers are usually taken in consultation with Chief Executive, Operation Manager, and Container controller (three strata). Accordingly, weights will be allocated to each job category and a

weighted random sample be drawn from each job category. Both quantitative and qualitative techniques will be used appropriately in the study. The questionnaire will consist questions concerning the respondents' stock position under different time horizons; container re-position cost; individual perception with respect to container sharing; and the feasibility of sharing containers as a solution. Respondents may mark their preferences under the scales of score ranging from +5 to -5 representing highly agree to highly disagree respectively and neutral (0). Ordinal Logistic Regression will be employed to analyse data and make recommendations to minimize costs associated with container imbalance.

Expected results

There are two decisive components in the container service namely, ship space and containers. The container inventory imbalance is an industry specific phenomenon which accounts for a substantial cost to CSL. The research established that the CSL can benefit from the collaboration. CSL are reluctant to pool their containers due to potential legal implications to borrowing carriers; container monitoring and tracking issues; indirect marketing advantages to competitors; and undue accountability on agents. However on the other hand the respondents perceive a 'win-win' situation through collaboration as it reduces costs of individual CSL and beneficial to the industry as a whole.

Key words: Container Shipping Lines (CSL), Container Inventory (CI), TEU, Inventory imbalance, Empty Containers (MTYs), Collaboration

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