

**International Conference on Business and Information
(ICBI - 2019)**

***"Business Transformation in Emerging Technology
Landscape"***

Factors Influencing Efficiency of Container Terminals in the Port of Colombo

Hasangi Liyanawaduge
CINEC Campus
Malabe
hasangiliyanawaduge1994@gmail.com

Lalith Edirisinghe
CINEC Campus
Malabe
lalith.edirisinghe@cinec.edu

Factors Influencing Efficiency of Container Terminals in the Port of Colombo

Abstract

Port efficiency is an important indicator of port performance; more efficient ports generate lower transportation costs and facilitate imports and exports of a country effectively. Sri Lanka needs to fast track its developments in ports and improve efficiency. Therefore, this research focuses its attention to the problem of identifying the factors influencing efficiency of container terminals in port of Colombo. In a container port, productivity is defined as the number of containers moves per hour. It considered four main factors such as quay crane performance, dwell time, customs services and infrastructure. These factors further divided to provide comprehensive analysis of the port efficiency. The research identified two set of participants namely, port employees and employees of shipping line. The stratified sampling was used to select the sample and data collected through the questionnaire. The two data sets were analysed using the Statistical package for social science (SPSS). There are three terminals currently actively operates in the in Colombo port namely, Jaya Container Terminal (JCT), South Asian Gateway Terminal (SAGT), and Colombo International Container Terminal (CICT). According to port employees Quay crane performance, truck turnaround time and significance of the infrastructure were most influential factors. On the other hand, performance of the customs, local domestic container dwell time and significance of the infrastructure were identified as per the respondents represented shipping lines. The contribution of this research may significantly help increase vessel arrivals to port of Colombo thus maximize utilization.

Key words: Quay Crane, Dwell time, Transshipment and Container throughput

Introduction

The sea carries around 95% of the world trade cargo and identified as the dominant transport mode exist in the world. Shipping is the most favoured mode of international transportation in Sri Lanka (Edirisinghe, Zhihong, & Wijeratne, 2015). This has been affected by the number of factors including the lowest cost of unit transport and it enable to carry larger volumes of cargos in a single voyage. Therefore, to gain the competitive benefit, the development of the shipping industry was given priority by the countries. Shipping is not a direct demand, but a derived demand of the international trade (Edirisinghe, Jin, & Wijeratne, 2016 b)). The ports act as the gateway for the global trade and identified as the hearts of economies of many nations. Conventional shipping where the goods are carried as break bulk or bulk forms. Container shipping plays a significant role in global supply chain (Edirisinghe, 2013).

Due to the huge cost, time waste and being a labour intensive process break bulk cargo transportation is identified as the most difficult method. In 1960's Macolm Maclean introduced