

CMM708 – RESEARCH METHODS

An Analysis of Inter-terminal Technical Productivity of Port of Colombo



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Abstract

Transportation is one of the robust factors which affects the development of a nation and is an impeccable segment that influences national integration and the world economy as a whole. Out of it, the maritime industry plays a prominent role in a country and ports & terminals are regarded as strong tools. Port of Colombo is one of the main transshipment hubs in the main shipping route in the international shipping market. It is demanded by numerous international traders, for their commercial purposes. The Port of Colombo is comprised of a state-owned Container terminal (Jaya Container Terminal) and Two Privately owned Container Terminals (South Asian Gateway Terminal, and Colombo International Container Terminal). Their facilities and productivity levels differ from one another in terms of their capabilities, thereby leading to a change in demand from shipping lines among the three terminals. Thus, Technical productivity as a whole is an important factor in enhancing the terminal productivity of these terminals. This research was based on 150 terminal performance reports obtained by the three terminals namely JCT, SAGT, and CICT of the port of Colombo. Gathered data owing to Berth productivity, Ship turnaround time, and Crane productivity of these three terminals were analyzed using Google Colab employing graphical interpretations, descriptive statistics, multivariate Analysis, and ANOVA test. The results highlighted there is a significant impact from Crane productivity and Berth productivity on the three terminals. Thus, the initial revelations prompted a further in-depth investigation of the factors affecting crane productivity and Berth productivity of these terminals. It was revealed that waiting time has a significant impact on crane productivity among the three terminals. Results further revealed that the Crane productivity of CICT is better other two terminals.

Keywords: Berth productivity, Crane productivity, Port of Colombo, Technical productivity, Ship turnaround time, Waiting time.