Transfer-Based Freight Transportation to Minimize Empty ReturnRuns of Trucks

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Sri Lankan freight transportation system depends much on roads via trucks. Most of the truck movements suffer from empty return runs. Another issue with the truck related freight transport system is the lack of warehousing facilities island wide. These reasons lead Sri Lankan direct freight transport system to incur increased freight transport costs. Increased freight transport costs affect the producer, consumer, and the Gross Domestic Product of the country. The objective of this study was to propose an alternative freight transportation system that minimizes empty return runs, while enabling the utilization of the existing warehousing facilities. Case study approach was selected for this study. Transport of imported items from Capital Colombo to Dambulla Dedicated Economic Centre (DDEC) on trucks was considered for the study. The details on transportation cost for empty return run of a truck from DDEC to Colombo was collected from local transport operators. The details on the quantity of products (packets of rice) directly transported to Colombo from nearby places to DDEC (Polonnaruwa) and their relevant transportation costs were collected from the local transport operators. The possibility of getting down, unloading, storing, and processing these packets of rice from Polonnaruwa to DDEC was investigated with the DDEC officials and local transporters. The details on costs incurred for processing the packets of rice received from Polonnaruwa at DDEC were collected from DDEC officials and transporters. This study proposed to transfer the packets of rice received from Polonnaruwa to an empty twenty-ton returning truck from DDEC to Colombo. The total cost for this transfer-based freight transport system was calculated and compared with the direct-based freight transport cost between Polonnaruwa to Colombo. It was found that this transfer-based freight transport system saved Rs. 14,000.00 per a twenty-ton truck. This system minimizes the empty return runs of trucks enabling them to better utilize the existing warehouses.

Keywords: Transfer-based, Freight, Empty return trucks, Savings, Warehouse