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Distribution Patterns and challenges of Multi Country Consolidation Operations in the Port Authority of Sri Lanka

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Sri Lanka has managed transshipment and Multi-Country Consolidation (MCC) operations at the Port of Colombo for the past 20 years by utilizing its strategic advantages. MCC is a crucial procedure in international logistics since it entails the consolidation of Less than Container Load (LCL) shipments from numerous origins to diverse destinations, or vice versa. In comparison to more established ports such as Singapore, Dubai, and Salalah, Colombo Port is still in its early stages of MCC development, despite its potential. Nonetheless, by implementing best practices and fully utilizing its competitive advantages, there is a great deal of space for improvement. At the moment, these MCC operations are solely managed by the Sri Lanka Ports Authority (SLPA). The challenges the SLPA facing are to track the origins and destinations of cargo and the storage period in warehouses. Real-world data, for three months, was used in this study to create predictive models and analyse the distribution patterns. Important factors like cargo origin and destination, cargo types and classifications, and the time periods covered by MCC operations are the main subjects of the study. To analyse cargo routes, find operational inefficiencies, and improve port logistics. The usefulness of each model in accomplishing the study goals is carefully considered, offering insightful information on how to improve MCC operations at Colombo Port.

Keywords: *data visualization, multi-country consolidation, origin, destination*