

Optimasi Penyaluran Bahan Bakar Minyak di wilayah Maluku = Optimization of Fuel Distribution in Maluku Region

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Abstrak

Bahan Bakar Minyak (BBM) merupakan komoditi yang vital dan mempunyai nilai strategis bagi konsumen dan produsen sehingga diperlukan nilai optimal kuantitas BBM dan faktor-faktor yang berpengaruh pada proses distribusi. Penelitian ini mengambil kasus pendistribusian BBM di wilayah Maluku untuk memecahkan masalah distribusi BBM yang bertujuan agar permintaan BBM kepada konsumen tetap terjaga dan dengan tetap meminimumkan biaya distribusi perusahaan. Model Mix Integer Linier Programming (MILP) menjadi solusi yang ditawarkan pada penelitian ini.

Penelitian terdahulu hanya yang meneliti distribusi BBM masih belum ada yang memasukan faktor multi depot, multimoda transportasi, analisis skenario distribusi normal, kebencanaan dan lonjakan permintaan dengan tetap memperhitungkan jarak tempuh dan kondisi geografis. Hasil dari penelitian yang telah dilakukan didapatkan nilai optimal kuantitasi distribusi BBM dan factor-factor yang berperan dalam proses distribusi BBM untuk masing-masing skenario yang dianalisis.

Fuel oil (BBM) is a vital commodity and has a strategic value for consumers and producers so that the optimal value of the quantity of fuel and the factors that affect the distribution process are needed. This study takes the case of the distribution of fuel in the Maluku region to solve the problem of fuel distribution which aims to keep the demand for fuel to consumers maintained and by minimizing the company's distribution costs. The Mix Integer Linear Programming (MILP) model is the solution offered in this research.

Previous studies have only examined the distribution of fuel, but none have included multi-depot factors, multimodal transportation, analysis of normal distribution scenarios, disasters and surges in demand while still considering mileage and geographical conditions. The results of the research that has been carried out obtained the optimal value of the distribution of fuel quantity and the factors that play a role in the process of fuel distribution for each scenario that being analyzed.