

ABSTRAK

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Judul : Analisis Metode *Global Minimum* dalam Penentuan Solusi Optimal pada Masalah Transportasi

Optimasi pada masalah transportasi bertujuan untuk menemukan solusi optimal. Beberapa metode solusi layak awal masalah transportasi umumnya tidak memperhatikan parameter masalah transportasi seperti persediaan, permintaan, dan biaya transportasi. Metode *Global Minimum* merupakan metode mencari solusi layak awal dengan memperhitungkan semua parameter masalah transportasi. Langkah pada Metode *Global Minimum* ini menambahkan tabel biaya baru yang merupakan hasil perkalian antara biaya transportasi awal dengan mencari nilai minimal antara persediaan atau permintaan. Selanjutnya pengalokasian dalam metode *Global Minimum* mencari sel biaya terendah dari sel biaya baru. Setelah komoditas terpenuhi hitung hasil alokasinya dengan tabel biaya awal. Penentuan solusi layak awal perlu kita uji keoptimalannya agar dapat mencapai solusi optimalnya. Dalam uji keoptimalan proses degenerasi tidak diperhatikan dalam penelitian ini sehingga prosesnya belum mencapai solusi optimum. Hasil Analisis menunjukkan metode *Least Cost* cenderung mengalokasikan sel degenerasi sehingga prosesnya belum dapat mencapai Solusi Optimal. Sedangkan metode *Global minimum* yang memperhatikan semua parameter masalah transportasi mengalokasikan sel non degenerasi sehingga di dapat solusi lebih optimal.

Kata Kunci : Masalah Transportasi, Solusi Layak Awal, Solusi Optimal, Metode *Global Minimum*, Metode *Modified Distribution*.

ABSTRACT

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Title : *Minimum Global Method Analysis in Determining Optimal Solutions to Transportation Problems*

Optimization of transportation problems aims to find optimal solutions. Several methods of initial feasible solutions to transportation problems generally do not pay attention to transportation problem parameters such as supply, demand, and transportation costs. The Global Minimum Method is a method of finding an initial feasible solution by taking into account all parameters of the transportation problem. This step in the Global Minimum Method adds a new cost table which is the result of multiplying the initial transportation costs by finding the minimum value between supply or demand. Then the allocation in the Global Minimum method looks for the lowest cost of the new costs. After the commodity is fulfilled, calculate the allocation result with the initial cost table. Determination of the initial feasible solution we need to test its optimization in order to achieve the optimal solution. In the optimization test, the degeneration process is not considered in this study so that the process has not reached the optimal solution. The results of the analysis show that the Least Cost method tends to allocate degeneration so that the process cannot reach the optimal solution. Meanwhile, the minimum Global method that takes into account all the parameters of the transportation problem which allocates non-degeneration so that a more optimal solution can be obtained.

Keywords: *Transportation Problems, initial feasible solution, Minimum Global Methods. Optimal Solution, Modified Distribution Method.*