SKRIPSI

OPTIMASI BIAYA TRANSPORTASI *FUZZY* PENUH MENGGUNAKAN *ALLOCATION TABLE METHOD* (ATM) DAN METODE *MODIFIED DISTRIBUTION*

OPTIMIZATION OF FULLY FUZZY TRANSPORTASTION COST USING ALLOCATION TABLE METHOD (ATM) AND MODIFIED DISTRIBUTION METHOD

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DEPARTEMEN MATEMATIKA
FAKULTAS SAINS DAN MATEMATIKA
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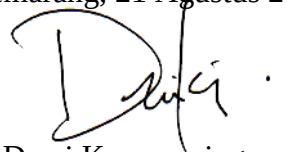

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ABSTRAK

OPTIMASI BIAYA TRANSPORTASI *FUZZY* PENUH MENGGUNAKAN *ALLOCATION TABLE METHOD* (ATM) DAN METODE *MODIFIED DISTRIBUTION*

Oleh

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Masalah transportasi *fuzzy* penuh adalah masalah transportasi dengan semua parameter merupakan bilangan *fuzzy*. Dalam mendapatkan solusi dari pemasalahan transportasi biasa pada umumnya diperlukan dua tahapan. Tahap pertama yaitu mencari solusi fisibel awal, kemudian tahap yang kedua adalah pengujian optimalisasi solusi fisibel awal. Pada penulisan tugas akhir ini, penulis mengkaji penyelesain masalah transportasi *fuzzy* penuh dengan menggunakan *Allocation Table Method* (ATM) untuk menemukan solusi fisibel awal kemudian dilakukan uji optimalisasi menggunakan metode *Modified Distribution* (MODI) dan parameter bilangan *trapezoidal fuzzy* diubah menjadi bilangan *crisp* menggunakan *roubast ranking*. Tugas Akhir ini juga membandingkan solusi *Allocation Transportastion Method* (ATM), metode Least Cost, *Vogel's Approximation Method* (VAM) dan *North West Corner* (NWC). *Allocation Transportastion Method* (ATM) memiliki solusi yang lebih minimal dari *Vogel's Approximation Method* (VAM). *Vogel's Approximation Method* (VAM) memiliki solusi fisibel awal yang lebih minimal dibandingkan metode *Least Cost* dan *North*

Kata Kunci : Masalah transportasi *fuzzy* penuh, bilangan *trapezoidal fuzzy*, *roubast ranking*, *Allocation Table Method* (ATM), metode *Modified Distribution* (MODI).

ABSTRACT

OPTIMIZATION OF FULLY FUZZY TRANSPORTASTION COST USING ALLOCATION TABLE METHOD (ATM) AND MODIFIED DISTRIBUTION METHOD

by

Duwi Kusumaningrum

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The fully fuzzy transportation problem is a transportation problem in all parameters being are fuzzy numbers. In obtaining solutions from transportation problem generally required two stages. The first stage is to find an initial basic feasible solution, then the second stage is testing the optimization of the initial basic feasible solution. In this Final Project, the authors reviewed the completion of the fully fuzzy transporation problem using Allocation Table Method (ATM) to find the initial basic feasible solution then tested the optimization using Modified Distribution method (MODI) and the trapezoidal fuzzy number parameter changed to crisp number using roubast ranking. This Final Project also compares Allocation Transportation Method (ATM) solutions, Least Cost method, Vogel's Approximation Method (VAM) and North West Corner (NWC). Allocation Transportation Method (ATM) has a minimal solution of Vogel's Approximation Method (VAM). The Vogel's Approximation Method (VAM) has the least initial feasible solution compared to the Least Cost and North West Corner (NWC) methods.

Keyword : Fully fuzzy transportastion problem, trapezoidal fuzzy number, Roubast Ranking, Allocation Table Method (ATM), Modified Distribution Method (MODI).

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