ABSTRAK

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Judul : **Penyelesaian Masalah Transportasi Fuzzy Menggunakan *Advanced Approximation Method* (AAM), *Modified Vogel's Approximation Method* (MVAM) dan Metode ASM**

Di dalam dunia suatu perusahaan pasti mengalami permasalahan transportasi. Masalah transportasi ini diperlukan untuk menjadwalkan suatu pengiriman barang dengan tujuan untuk meminimumkan biaya transportasi. Tujuan dari model transportasi adalah merencanakan pengiriman sesuatu dari sumber-sumber ke tujuan sedemikian rupa untuk meminimumkan total biaya transportasi. Dalam tugas akhir ini ada beberapa metode untuk memecahkan masalah transportasi fuzzy, disini dijelaskan tiga metode untuk membandingkan yang mana metode terbaik untuk mendapatkan solusi yang optimal yaitu Pertama *Advanced Approximation Method* (AAM), dengan langkah menemukan elemen terkecil di setiap baris dan kolom dari tabel biaya fuzzy yang diberikan dengan cara menambahkannya kemudian kurangkan dari setiap elemen dari baris, Mempunyai hasil untuk kasus *unbalanced* yaitu 100,5 dan hasil kasus *balanced* yaitu 1731,67. Kedua *Modified Vogel's Approximation Method* (MVAM), dengan langkahnya mendapatkan matriks TOC. Mempunyai hasil untuk kasus *unbalanced* yaitu 100,5 dan hasil kasus *balanced* yaitu 1851,67. Ketiga Metode ASM (Abdul, Shakel, dan M.Khalid), dengan langkahnya mengurangi nilai setiap baris dan kolom pada tabel transportasi dengan nilai minimum pada setiap baris dan kolom kemudian memilih nilai nol pertama pada matriks biaya. Mempunyai hasil untuk kasus *unbalanced* yaitu 121,67 dan hasil kasus *balanced* yaitu 1851,67. Permintaan dan Persediaan produk diwakili dengan bilangan fuzzy segitiga. Selain tiga metode ini pun terdapat metode lain diantaranya metode Samuel Raja (SR), Zerro Suffix, *Shimshak Vogel's Approximation Method* (SVAM), *Goyal Vogel's Approximation Method* (GVAM), dan *Balakrishnan Vogel's Approximation Method* (BVAM).

Kata kunci : Masalah Transportasi fuzzy, *Advanced Approximation Method* (AAM), *Modified Vogel's Approximation Method* (MVAM), Metode ASM, bilangan fuzzy segitiga.

ABSTRACT

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Title ***: Solving of Fuzzy Transportation Problem by using Advanced Approximation Method (AAM), Modified Vogel's Approximation Method (MVAM) and Method ASM***

In the world of a company definitely experienced the problem of transportation. The problem of transport is required to schedule a delivery of goods with a view to minimising their cost of transportation. The purpoqse of the transport model is planning the delivery of something from sources to destinations to minimising total cost of transportation. In this final project there are several methods to solve fuzzy transportation problem, here is described the three methods for comparing which method is best to get the optimal solution, first Advanced Approximation Method (AAM), with the smallest elements find stride in each row and column of the table given by means of fuzzy add it then reduce it from each element of rows, Have the results for the case of unbalanced i.e. 100.5 and balanced case results i.e. 1731.67. The two Modified Vogel's Approximation Method (MVAM), with stride get matrix TOC. Have the results for the case of unbalanced i.e. 100.5 and balanced case results i.e. 1851.67. When the method of the ASM (Abdul, Shakel, and M.Khalid), reducing the value of each stride with rows and columns in the table of transportation with minimum value in each row and column then choose the first zero value on a cost matrix. Have the results for the case of unbalanced i.e. 121.67 and balanced case results i.e. 1851.67. Demand and supply of the products represented by fuzzy triangular numbers. In addition to this there are three methods other methods include methods of Samuel Raja (SR), Zerro Suffix, Shimshak Vogel's Approximation Method (SVAM), Goyal Vogel's Approximation Method (GVAM), and Balakrishnan Vogel's Approximation Method (BVAM).

Keywords: fuzzy transportation problem, Advanced Approximation Method (AAM), Modified Vogel's Approximation Method (MVAM), fuzzy numbers, the ASM method of triangle.