

## ABSTRAK

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**Judul** : Perbandingan Solusi Layak Awal Masalah Transportasi *Fuzzy*  
Menggunakan *Maximum Supply With Minimum Cost Method*, *ASM*  
*Method*, dan *Average Total Opportunity Cost Method*

Penelitian ini membahas mengenai suatu permasalahan transportasi *fuzzy* seimbang dengan bilangan *fuzzy* trapesium. Dalam suatu permasalahan transportasi yang sering diekspolitasi yaitu masalah yang melibatkan ketidakakuratan dalam pengumpulan dan perlakuan terhadap faktor biaya, penawaran dan permintaan sehingga mengharuskan penggunaan logika *fuzzy* dalam menangani dan mengembangkan metode baru. Pada penelitian ini metode yang digunakan adalah metode *Maximum Supply with Minimum Cost*, metode *ASM* dan metode *Average Total Opportunity Cost*, adapun algoritma *Average Total Opportunity Cost* dibagi menjadi dua tahap yaitu tahap algoritma *Total Opportunity Cost Table* dan tahap algoritma alokasi. Sebelum menggunakan tiga metode tersebut harus dilakukan pengubahan nilai biaya yang dipakai dari kondisi *fuzzy* ke kondisi tegas menggunakan metode *Robust Ranking Technique*. Skripsi ini bertujuan untuk melihat dari ketiga metode tersebut manakah yang menghasilkan biaya paling minimal. Berdasarkan hasil penelitian diperoleh bahwa metode *ASM* lebih baik dibandingkan dengan metode *Maximum Supply with Minimum Cost* dan metode *Average Total Opportunity Cost*.

Kata Kunci: Masalah Transportasi *Fuzzy*, Bilangan *Fuzzy* Trapesium, metode *Maximum Supply with Minimum Cost*, metode *ASM*, metode *Average Total Opportunity Cost*, metode *Robust Ranking Technique*.

## ***ABSTRACT***

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**Title** : *A Comparison of Feasible Initial Solutions to Fuzzy Transportation Problems Using Maximum Supply With Minimum Cost Method, ASM Method, and Average Total Opportunity Cost Method*

*This study discusses a problem of balanced fuzzy transportation with fuzzy trapezoid numbers. In a transportation problem that is often exploited, it is a problem that involves inaccuracies in the collection and treatment of cost, supply and demand factors, thus requiring the use of fuzzy logic in handling and developing new methods. In this study the method used is the Maximum Supply With Minimum Cost method, the ASM method and the Average Total Opportunity Cost method, while the Average Total Opportunity Cost algorithm is divided into two stages, namely the Total Opportunity Cost Table algorithm stage and the allocation algorithm stage. Before using these three methods, the cost value must be converted from the fuzzy condition to the crisp condition using the Robust Ranking Technique method. This thesis aims to see which of the three methods produces the least cost. Based on the research results obtained that the ASM method is better than the Maximum Supply with Minimum Cost method and the Average Total Opportunity Cost method.*

*Keywords:* *Fuzzy Transportation Problems, Fuzzy Trapezoid Numbers, Maximum Supply with Minimum Cost method, ASM method, Average Total Opportunity Cost method, Robust Ranking Technique method.*