

## ABSTRAK

**Nama** : Ardiansyah Novrizal  
**NIM** : 1147010007  
**Judul** : **Penyelesaian Masalah Transportasi Dengan *Harmonic Mean Approach* dan *Maximum Divide Minimum Allotment (MDMA) Method***

Penelitian ini membahas tentang masalah transportasi seimbang yang diselesaikan dengan menggunakan metode *Harmonic Mean Approach (HMA)* dan *Maximum Divide Minimum Allotment (MDMA) Method* untuk mencari solusi optimal. Metode *Harmonic Mean Approach (HMA)* ini menentukan nilai rata – rata harmonik pada setiap baris dan kolom kemudian ditentukan nilai rata – rata harmonik terbesarnya. Setelah itu, alokasikan persediaan ( $S_i$ ) atau permintaan ( $D_j$ ) minimum pada nilai terendah pada baris atau kolom yang berhubungan. Sedangkan Metode *MDMA* menentukan nilai terbesar pada tabel transportasi, kemudian tiap elemen biaya dibagi dengan nilai terbesar tersebut. Selanjutnya pilih hasil paling minimum untuk pengalokasian pertama. Setelah mengaplikasikan metode *Harmonic Mean Approach (HMA)* dan *Maximum Divide Minimum Allotment (MDMA) Method* pada objek penelitian kemudian dibandingkan solusi optimalnya. Setelah dibandingkan ternyata *Maximum Divide Minimum Allotment (MDMA) Method* lebih optimal, karena biaya distribusinya lebih minimum.

**Kata Kunci:** Masalah transportasi, Masalah transportasi seimbang, metode *Harmonic Mean Approach (HMA)*, *Maximum Divide Minimum Allotment (MDMA) method*.

## **ABSTRACT**

**Name** : Ardiansyah Novrizal  
**NIM** : 1147010007  
**Title** : *Solving of Transportation Problem with Harmonic Mean Approach Method and Maximum Divide Minimum Allotment (MDMA) Method*

*This Research discusses about transportation problem solved by Harmonic Mean Approach (HMA) method and Maximum Divide Minimum Allotment (MDMA) Method to find optimum solution. Harmonic Mean Approach (HMA) determine the value of the harmonic mean for each row and column then determine the maximum value of the harmonic mean. Afterwards, allocate the minimum supply or demand at the place of minimum value of the related row or column. Maximum Divide Minimum Allotment (MDMA) Method determine the maximum value in the transportation table, then each cost element divided by the maximum value. Afterwards, select the minimum value for the first allocation. After applying Harmonic Mean Approach (HMA) and Maximum Divide Minimum Allotment (MDMA) for the object of research then compared optimum solution. The comparison between both method give result that Maximum Divide Minimum Allotment (MDMA) method is more optimum, because of minimum cost distribution.*

**Keywords:** *Transportation problem, balanced transportation problem, Harmonic Mean Approach (HMA) method, Maximum Divide Minimum Allotment (MDMA) method.*