

# **ANALISIS JUMLAH PERSONIL PENANGANAN KARGO DI TERMINAL KARGO DOMESTIK BANDARA AHMAD YANI DENGAN SIMULASI ARENA**

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## **ABSTRAK**

Tren Kenaikan jumlah penanganan kargo di Terminal Kargo Domestik Bandara Ahmad Yani sendiri dari tahun 2009 hingga 2019 mencapai 217,18 persen, akan tetapi mengalami penurunan sebesar 47 persen di tahun 2020 karena pandemi covid 19. Jika ditinjau dari tahun sebelum pandemi, dapat dilihat bahwa jumlah kargo berpotensi mengalami kenaikan. Sehingga, jika memang terjadi kenaikan, maka analisis ini perlu dilakukan untuk menentukan jumlah personil penanganan kargo yang optimal di Terminal Kargo Domestik Bandara Ahmad Yani tahun 2024.

Metode Peramalan yang digunakan pada penelitian ini adalah *Linear Moving Average*, *Double Exponential Smoothing* *Brown's Linear Method* dan Regresi Linier Sederhana yang nantinya akan dibandingkan metode mana yang memiliki nilai kesalahan terkecil. Selain itu dibuat model simulasi penanganan kargo di Terminal Kargo Domestik Bandara Ahmad Yani pada tahun 2024 dengan jumlah personil yang optimal menggunakan *ARENA Simulation Software*.

Hasil dari Penelitian menunjukkan, pada Tahun 2024 dengan menggunakan metode regresi linier sederhana terdapat 7.816.594,9 kg kargo yang dibongkar (*incoming*) dan 7.847.581,01 kg kargo yang dimuat (*outgoing*) pada tahun tersebut di Terminal Kargo Domestik Bandara Ahmad Yani. Kemudian dari model simulasi yang dibuat, penulis menemukan bahwa pada tahun 2024 untuk mengoptimalkan penanganan kargo di Terminal Kargo Domestik Bandara Ahmad Yani, diperlukan penambahan jumlah personil sebanyak 1 Orang AVSEC beserta unit peralatan Timbangan dan X-Ray, 1 Orang *Dispatcher* dan 1 Orang *Transporter*.

**Kata Kunci : Kargo, Peramalan dan Simulasi Arena**

**ANALYSIS NUMBERS OF CARGO HANDLING PERSONNEL IN  
DOMESTIC'S CARGO TERMINAL OF AHMAD YANI AIRPORT WITH  
ARENA SIMULATION**

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**ABSTRACT**

*The increases trends of the number of cargo handling at the Ahmad Yani Airport Domestic Cargo Terminal itself from 2009 to 2019 reached 217.18 percent, but decreased by 47 percent in 2020 due to the covid 19 pandemic. When reviewed from the year before the pandemic, it can be seen that the numbers of cargo has the potential to increase. So, if there is an increase, then this analysis needs to be carried out to determine the optimal number of cargo handling personnel at the Ahmad Yani Airport Domestic Cargo Terminal in 2024.*

*The forecasting methods that used in this research are Linear Moving Average, Double Exponential Smoothing Brown's Linear Method and Simple Linear Regression which will later be compared which one has the smallest error value. Moreover in this research is created model simulation of cargo handling in Ahmad Yani Airport Domestic Cargo Terminal on 2024 with optimal numbers of personnel using ARENA Simulation Software.*

*The Results of this research are shown that on 2024 with simple linear regression method about 7.816.594,9 kg are forecasted as cargo that unloaded (incoming) and about 7.847.581,01 kg kargo are forecasted as cargo that loaded (outgoing) on that year in Ahmad Yani Airport Domestic Cargo Terminal. And then from the model simulation that had been made, it was found that on 2024 to optimize cargo handling in Ahmad Yani Airport Domestic Cargo Terminal, the additional personnel that needed are about 1 person of Aviation Security with the unit of of X-ray and weight scale, 1 person of Dispatcher and 1 person of Transporter.*

**Keywords : Cargo, Forecasting and Arena Simulation**