

ABSTRACT

This study aims to analyze the impact of aircraft movements on the operations of AirNav Indonesia, particularly on the demand for Air Traffic Controllers (ATC) at Soekarno-Hatta International Airport. A quantitative method with a time series approach is employed, using the Seasonal Autoregressive Integrated Moving Average with Exogenous Variables (SARIMAX) model to evaluate the relationship between the number of aircraft movements (exogenous variable) and the number of ATC personnel required (dependent variable).

The data analyzed includes both domestic and international aircraft movements at Soekarno-Hatta International Airport, as well as the number of ATC personnel at the JATSC Branch of AirNav Indonesia, covering the period from 2022 to 2023.

The results show that increases in aircraft movements have a significant impact on the rise in ATC personnel demand. This study provides recommendations for AirNav Indonesia in planning and scheduling ATC personnel, especially in anticipating seasonal fluctuations to ensure operational continuity and flight safety.

Keywords: aircraft movements, Air Traffic Controller (ATC), resource planning SARIMAX, Soekarno-Hatta International Airport, time series