

ABSTRACT

The Covid-19 pandemic has changed the order of human life in the world, including Indonesia. In order to avoid the transmission of the Covid-19 virus, a health protocol in the form of maintaining a distance between humans must be 1 meter apart. The check-in area at the airport is one of the places that must receive attention in implementing this health protocol. With the health protocol and the addition of checking flight documents at the check-in counter, it causes additional time in the passenger departure process. Therefore, if it is not managed properly, it can become a problem that creates long queues and creates inconvenience to the passengers.

In this study using field observations by recording queues at the check-in area of Supadio Pontianak airport on March 18-27 2021 to describe the conditions and time required for each passenger in the queue system at the airport and provide the best queuing simulation that can be used at the airport. Supadio during the Covid-19 Pandemic.

This study uses R studio to examine the dynamic behavior of the observed data. Exploration of the dynamic behavior of the data is done by entering the observed data into the Simmer simulation model. From the results of the observation data will be the baseline to be tested and the best will be selected as the baseline model. The baseline model uses a Markovian model with stochasticity represented by exponential, Poisson, erlang and normal distributions for arrival time, inter-arrival and service.

The criteria for selecting the best model is a model based on parameters obtained from observation data which gives the best total time and waiting time. Then to be able to get a model that is flexible and can be used as an extrapolation to the normal period, it is necessary to do stress analysis. Stress analysis of the baseline model is carried out by introducing the q factor. The q factor serves as a rate multiplier. The model will be in a more stressful condition as the value of q increases. The simulation uses the Baseline model which is applied to the stress test (Extrapolation-n model), where it can be concluded that the current check-in system is quite resilient to changes in passenger load. In other words, with the current service time and check-in counters that are always open three times, the passenger arrival speed of 100 times from the pandemic period can still be served without the system experiencing a break down.

Keywords: Airport, Check-in, Queue,