

## ABSTRACT

PT. POS INDONESIA Mail Processing Center Bandung is a BUMN company of service delivery of goods. This company hold a responsible to all consignment which enter and go out from Bandung. As it's function as the center of distribution, Mail Processing Center should has a good performance so it can deliver the consignment on time and in a well condition. Good performance should be fulfill everytime hence it won't dissapointed it's customer and also to keep survive in this delivery service bussiness. Some ways to reach a good performance is to hold the bussiness in effective and efficient way. In this case, it means that Mail Processing Center should distribute it's consignment to the service area efficiently, so it will make the efficiency in total distance, vehivles needed, employees, and the released cost.

Existing condition of Mail Processing Center shows a distribution route which unstructurely. That existing distribution route just based on estimation without any matematics calculation. Existing condition shows that there is 7 routes with 7 units vehicles needed, and 14 person of employees needed. The total distance of existing route is 861 km and the released cost is Rp. 193.725/day. This existing condition is not yet known whether it has been optimal.

To increase the performance of Mail Processing Center, evaluation is required concerning optimal transportation model. By designing transportation model using Saving Matrix Method, this research gives an optimal proposal distribution routes. Further, this proposal distribution routes will give a saving in total distance, number of vehicles needed, number of employees, and the released cost.

Conclusion which can be taken from this research is the optimal distribution route achieved by designing 3 clusters, which is each cluster consist of some service areas. This proposal distribution route need 3 units of vehicles with 6 person employees. The total distance of proposal distribution route is 714 km and the released cost is Rp. 160.650/day. Comparing the proposal route and the existing one, the company could has a saving of cost Rp. 33.075/day. By the calculation above, the company could hold it's distribution activity more optimally and efficientlly.

**Keyword** : *Saving Matrix, Travelling Salesman Problem, Optimization, Cluster.*