

OPTIMALISASI RUTE DAN BIAYA PENGIRIMAN PADA DISTRIBUSI AYAM KAMPUNG SUPER MENGGUNAKAN METODE TRANSPORTASI DAN ALGORITMA *CLARKE AND WRIGHT* PADA UMKM PITIK BALAP

Yudha Purnomo¹, Maria Gratiana Dian Jatiningsih²

INTISARI

Latar Belakang: UMKM Pitik Balap memiliki dua *outlet* sebagai pusat distribusi ayam kampung super. Hasil observasi menunjukkan adanya ketidakseimbangan distribusi akibat sistem pengiriman yang belum terstruktur. Hal tersebut berdampak pada tingginya biaya transportasi.

Tujuan: Menentukan kapasitas pengiriman untuk setiap *customer* dengan biaya pengiriman terkecil dan mengetahui rute yang optimal dalam pendistribusian ayam.

Metode: Penelitian ini menggunakan metode transportasi dan Algoritma *Clarke and Wright Savings*.

Hasil: Hasil perhitungan metode transportasi menunjukkan bahwa *Outlet* Ngaglik mendistribusikan ayam ke WM Bu Yanti, Pawon Mbah Gito, RM Pondok Galih, RM Bu Menuk, Wisata GK Kentungan, WM Depok, dan RM Godean. Sementara *Outlet* Pasar Umbulharjo melayani pengiriman ke Soto Kadipiro, RM Godean, Ayam Kampung Bantul, Soto Ayam Wonosari, dan MM Supermarket Kalasan. Hasil penerapan algoritma *Clarke and Wright* menghasilkan total biaya distribusi sebesar Rp225.405 dalam sekali pendistribusian ayam dengan dua moda transportasi *Pick-Up*.

Kesimpulan: Setelah menerapkan metode transportasi dan Algoritma *Clarke and Wright*, UMKM Pitik Balap mampu mengoptimalkan pengiriman dan mengurangi biaya distribusi sebesar Rp74.594.

Kata Kunci: *Biaya, Rute, Metode Transportasi, Algoritma Clark and Wright*

**OPTIMIZATION OF ROUTES AND SHIPPING COSTS IN THE DISTRIBUTION
OF SUPER NATIVE CHICKEN USING THE TRANSPORTATION METHOD
AND THE CLARKE AND WRIGHT ALGORITHM AT UMKM PITIK BALAP**

Yudha Purnomo¹, Maria Gratiana Dian Jatiningsih²

ABSTRACT

Background: UMKM Pitik Balap has two outlets as distribution centers for super native chicken. Observations show that there is an imbalance in distribution due to an unstructured delivery system. This has an impact on high transportation costs.

Objective: Determining the delivery capacity for each customer with the smallest delivery cost and knowing the optimal route in distributing chicken.

Methods: This study uses the transportation method and the Clarke and Wright Savings Algorithm.

Result: The transportation method calculation results show that Ngaglik Outlet distributes chicken to WM Bu Yanti, Pawon Mbah Gito, RM Pondok Galih, RM Bu Menuk, Wisata GK Kentungan, WM Depok, and RM Godean. While the Umbulharjo Market Outlet serves deliveries to Soto Kadipiro, RM Godean, Ayam Kampung Bantul, Soto Ayam Wonosari, and MM Supermarket Kalasan. The results of the application of the Clarke and Wright algorithm resulted in a total distribution cost of Rp225,405 in one chicken distribution with two modes of Pick-Up transportation.

Conclusion: After applying the Transportation method and the Clarke and Wright Algorithm, UMKM Pitik Balap can optimize shipments with distribution cost savings of Rp74,594.

Keywords: Cost, Route, Transportation Method, Clark and Wright Algorithm