

Improving the Global Competitiveness of SMEs by Logistics Transportation Management: Case Study Chicken Meat Supply Chain

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Abstract : The Logistics Transportation techniques, Open Vehicle Routing (OVR) is an approach toward transportation cost reduction, especially for long distance pickup and delivery nodes. The outstanding characteristic of OVR is that the route starting node and ending node are not necessary the same as in typical vehicle routing problems. This advantage enables the routing to flow continuously and the vehicle does not always return to its home base. This research aims to develop a heuristic for the open vehicle routing problem with pickup and delivery under time window and loading capacity constraints to minimize the total distance. The proposed heuristic is developed based on the Insertion method, which is a simple method and suitable for the rapid calculation that allows insertion of the new additional transportation requirements along the original paths. According to the heuristic analysis, cost comparisons between the proposed heuristic and companies are using method, nearest neighbor method show that the insertion heuristic. Moreover, the proposed heuristic gave superior solutions in all types of test problems. In conclusion, the proposed heuristic can effectively and efficiently solve the open vehicle routing. The research indicates that the improvement of new transport's calculation and the open vehicle routing with "Insertion Heuristic" represent a better outcome with 34.3 percent in average. in cost savings. Moreover, the proposed heuristic gave superior solutions in all types of test problems. In conclusion, the proposed heuristic can effectively and efficiently solve the open vehicle routing.

Keywords : business competitiveness, cost reduction, SMEs, logistics transportation, VRP

Conference Title : ICIBE 2015 : International Conference on Industrial and Business Engineering

Conference Location : Paris, France

Conference Dates : April 27-28, 2015