

# Behavioral Operations Research in Advancing Emergency Logistics Planning in Natural Disasters

## ABSTRACT

In the past, researches in emergency logistics planning mainly focus on objective targets such as minimal time or maximum efficiency without considering the attitudes of people affected by a natural disaster. In recent years, several events caused by disaster victims affected the result of emergency logistics planning. In this paper, we present a method of defining customer's satisfaction attitude based on the theory of cumulative prospective theory (CPT). We take traveling salesman problem with time windows based on customer's satisfaction (TSPTW\_CS) as an example to show BOR in advancing the practice of OR. This paper provides a practical model to help policy-maker improving their ability to make plans. Finally, a numerical example is presented to indicate the value of considering the disaster victims' attitude for emergency logistics planning in natural disasters.