

# Allocating monetary incentives in food delivery platforms

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## **Abstract**

The delivery platform creates an ecosystem that connects customers, restaurants, and delivery riders. In this research, we consider an efficient way of improving the efficiency of delivery platforms using monetary incentives. Allocating monetary incentives, the platform indirectly drives delivery riders to pick orders from customers that are difficult to deliver. To do this, we use an inverse optimization model and find an optimal matching between the delivery rider and the order, and the exact amount of incentives to be paid to each rider. In the simulation environment, we define the participants' characteristics, including the participants' mechanism of action. In our experiments, we show that monetary incentive allocation can increase the number of the customers served by a delivery platform and control the total amount of the paid incentives at a certain level. Keywords: food delivery platform, inverse optimization, simulation, incentive, experiment

## **Keywords:**

## **Track:**