



Research School for Operations
Management and Logistics

Improving logistics performance in e-commerce by integrating warehouse and delivery operations

Ruben D'Haen – Hasselt University

Business-to-consumer (B2C) e-commerce sales are booming. At the same time, customers expect a fast and accurate delivery. To meet these expectations at low cost, excellent logistics performance is indispensable. In this context, integrating operational decisions (e.g., taking warehouse and delivery decisions simultaneously) can be seen as one of the key opportunities for improvement. Previous studies have already shown the large potential benefit of integrating order picking and delivery operations in limited settings. However, it is unclear how both problems can be integrated, and what the benefits are, in more realistic settings. Therefore, the main objective of this project is to develop adequate models and heuristic algorithms to support integrated decision making in a realistic setting, and to analyze the benefit of integrated decision making under different problem characteristics.