



Research School for Operations  
Management and Logistics

**Integrating inventory and transportation management in cash supply chains**

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In this project we aim to develop strategies to increase the efficiency of cash supply chains by integrating inventory management and transport optimization. In order to get insight in the difficulties of the optimization problems at hand, the mathematical complexity of some special cases of the Inventory Routing Problem is analyzed. Moreover we extend the well-known Joint Replenishment Problem by approximating transportation costs and develop an exact solution approach. Further research will be aimed at modeling and solving rich inventory routing problems inspired by -but not limited to- cash supply chains.

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