



Research School for Operations
Management and Logistics

Machine learning for supply chain management

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The research will focus on applying machine learning techniques, more specifically reinforcement learning, on supply chain issues/decision processes. The main focus will be on inventory management problems. Some of these decision processes can be formulated as Markov Decision Processes (MDPs). Due to the curses of dimensionality, these decision processes (MDPs) tend to be hard to solve optimally and a need for approximate solutions exists. Whereas optimal algorithms often only work for very stylized and small problems, reinforcement learning allows for large models and a model-free optimization.

In conclusion, the aim of this research is to look for which supply chain problems reinforcement learning can be used and if near-optimal solutions can be achieved.