



Research School for Operations  
Management and Logistics

**Decision support modelling of eco-efficient collaborative fresh food logistics**

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Food distribution is accountable for a considerable part of global food waste and emissions. Moreover, the available transportation means are not efficiently used. This results in the need to organise food logistics more efficiently such that it will become more sustainable. Much literature suggests that food companies collaborate in order to improve food supply chain sustainability. However, the effects of collaboration on sustainability have only scarcely been quantified. Moreover, food specific aspects such as perishability are not realistically taken into account in sustainable food logistics literature and companies are hesitant to implement collaboration. The objective of this research is to find what forms of collaboration and coordination can improve sustainability in the case of fresh food logistics. To this aim, we will apply literature research, mathematical modelling and case studies. Using literature research, we can find the main characteristics of sustainable fresh food logistics. Using mathematical modelling, we will clarify how the collaboration should be coordinated and how different forms of collaboration effect sustainability. Using case studies, we can get input for the modelling studies and test and verify the findings from literature and modelling.