

## **Cooperation in Green Technology Investment (English)**

Green technology investments are fundamental to driving sustainable practices that reduce greenhouse gas emissions, conserve natural resources, and improve air and water quality while deriving economic growth. However, green technology investment can also be associated with challenges, such as high costs, lack of infrastructure, and uncertain returns on investment. Therefore, it is crucial that the green investment is done in an equitable and sustainable way. So far, in the academic literature, the green investment decision has mainly been reflected as the burden of a single player in the supply chain. Only a few papers discuss the possibility of sharing the burden of the cost of investment among the players in the supply chain. Thus, this thesis aims first to analyze the current state of research that applies cooperative models in green supply chains. Then a dyadic game with a supplier and a manufacturer should be developed that applies Nash bargaining to understand the impact of cooperation with regards to investment cost. Finally, the student should interpret the results and draw appropriate conclusions.

*This thesis requires a basic understanding of game theoretical models such as Nash bargaining and the Stackelberg game and an affinity towards analytical models.*