Lecture Series of the
Research Institute for Supply Chain Management

Friday, June 16, 2023, 12:30 pm

Room TC.5.03, Welthandelsplatz 1, 1020 Vienna

DANJA SONNTAG:

"ALLOCATION OF RECYCLING CREDITS TO END-PRODUCTS IN THE PLASTICS INDUSTRY"

The EU's Circular Economy Action Plan is one of the main building blocks of the European Green Deal, aiming for the EU's transition into a circular economy. Following this target, the plastics industry with global recycling rates of less than 20% has come into focus. To achieve higher circularity, chemical recycling is gaining importance as a supplement to mechanical recycling. Especially the virgin-quality of chemically recycled feedstock is of high interest, e.g., for the food industry for sustainable packaging, subject to high hygiene standards, or the automobile industry, subject to high safety regulations.

If fossil feedstock is replaced by recycled feedstock step-by-step, controversial opinions exist on the part of companies and non-governmental organizations on how to allocate recycling credits to different end-products. A certified and recognized chain-of custody method currently used for tracking fossil and recycled feedstock through production is the mass balance approach. The aim of this research project is to analytically analyze the economic and environmental implications of different allocation policies available under the mass balance approach. To get a comprehensive picture, the roles of policy makers setting the guidelines behind the mass-balance approach, manufacturers deciding on the amount of recycled feedstock to purchase, and consumers making a purchase decision is considered.

Danja Sonntag earned a doctoral degree in business economics from Otto von Guericke University in Magdeburg (Germany) in 2017 and afterwards accepted a position as assistant professor for operations management at the University of Mannheim (Germany). Since February 2023, she is associate professor for production management at Lund University (Sweden). Danja Sonntag's research is in the areas of predictive and prescriptive analytics with applications mainly in inventory management but interfaces to the areas of production management and transportation. She has published her work in highly ranked international journals such as Production and Operations Management and the European Journal of Operational Research.

For further information, please contact sekretariat.itl@wu.ac.at