Track 2.1 Innovation through artificial intelligence and data-driven business models for sustainable transformation

How Can Digital Technology Use And Innovation Contribute To Sustainable Transformation Of Business Models In The Agri-food Sector?

Slot, Laura Eline [1]; Donner, Mechthild [1]; El Hadad-Gauthier, Fatima [2]
1. INRAE (French National Research Institute for Agriculture, Food and Environment)
2. CIHEAM-IAMM (Institut Agronomique Méditerranéen de Montpellier)

The expectations of digital technologies in sustainable agricultural development are considerable. However, applying these technologies in agri-food value chains can have downsides, which are still barely studied. The main objectives of this systematic literature review were to discover the state of the art of the research in the use of digital technologies in business models contributing to sustainability in the agri-food sector, and to make recommendations for future research and management practice. In order to bring concepts together, develop a theoretical framework and advance knowledge, performing a literature review is conducive. This review worked with the commonly-used PRISMA-method to develop a systematic literature review. From this review, an overview of factors of digitalisation in business models of agri-food value chains were distinguished. Key themes that were found in the literature were the effects of COVID-19 on digitalisation and business resilience, the sustainability of business models in economic sense, and the importance of communication technologies in agri-food value chains. This paper argues that even though digital technologies can enhance social interaction, the human element can be lost in the process. Even if one business makes successful use of digital technologies, other actors in local and international value chains might not profit. The paper recommends for future research and management practice to use a framework that looks through a value co-creation and open innovation perspective to both the business model level and the interaction between (sustainable) business models in local and global food systems.