S3_Bibliographic Assessment

Evolving Bibliographic Trends in ASC Research

The bibliographic analysis substantiated the multidisciplinary nature of the ASCs. The visualization revealed a dynamic shift in journal dominance, signifying the evolution of ASC research over time. Before 2015, journals from the operational and production research domains were predominant, indicated by the deep blue dots (Figure 2, top of the map). This dominance underscores their foundational role and high citation frequency within the discipline during that period. However, over time, a clear shift was observed towards integration of computational and mathematical advancements.

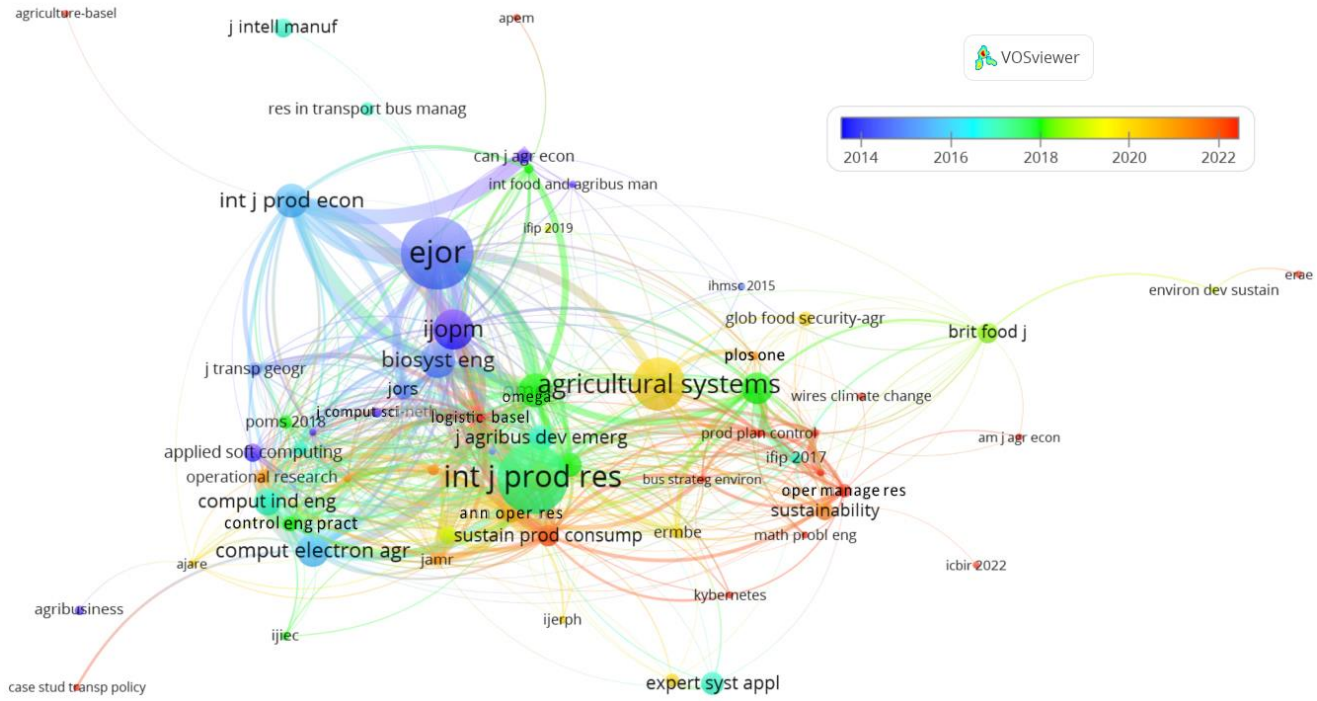

Figure S3_1: Bibliographic Network representing research published in journals between 2000 and 2023

Between 2015-2020, journals situated at the intersection of applied computer science, computation engineering, and production research (Figure 2, bottom left), gained prominence, reflecting the ongoing evolution within the supply chain management (SCM) field and showcasing the snowball effect on the agricultural domain. Simultaneously, other journals published from 2020 onwards, primarily associated with systems, food, and sustainability (Figure 2, right of the map), started to play a major role in the field, closely aligned with systems thinking, food security, and sustainable ASC practices. However, their visible separation from other clusters, imply a disconnect from the traditional OR, and a lack of integrated studies combining these methodologies. Transport and logistics-related journals appear less frequently and are more peripheral, suggesting their underrepresentation in core ASC research. This gap presents a significant research opportunity; integrating transport and logistics with computational and systems perspectives, could address practical challenges in post-harvest logistics. Addressing these gaps through cross-collaboration and targeted research can lead to a more holistic understanding and to more effective solutions for ASCs, improving the sector's sustainability and resilience.