Even before the COVID-19 pandemic, localized production and customization were increasingly relevant opportunities in industries like textile/apparel; to reduce overproduction, for both improved profitability and environmental sustainability. However, understanding of how these reconfigurations impact supply chain designs, and what are the associated implementation challenges, is required. To understand these opportunities and challenges in the apparel industry, this research adopts a holistic supply network configuration and paradox perspective to address different small-series production models (demand-driven/on-demand) in high-cost contexts. Diverse companies from several EU countries (e.g. Sweden, Italy, France, Germany) were studied, with different customization levels and stages of small-series production implementation.

The findings confirm network design decisions are driven by multiple capabilities (i.e. performance goals): quality, environmental sustainability, product variety, product/process innovation, flexibility, delivery-speed and reliability. These performance goal-related drivers are often conflicting (especially at lower product customization levels), including traditional performance goal trade-offs as well as conflicting environmental sustainability and risk considerations. While capabilities for sensing tensions are found to be common among several diverse companies studied, capabilities for tension management and adaptability vary. The insights in the thesis can provide guidance for practitioners in textile/apparel-like industries with (re)configuration and paradoxical sensemaking.

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Opportunities and challenges from selected EU countries

THE SWEDISH SCHOOL OF TEXTILES
UNIVERSITY OF BORÅS