

Toward a Value Coordination Approach to Reshoring with Industry 4.0

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Abstract

This work-in-progress explores the relationship between Industry 4.0 and reshoring through a scoping review of 52 papers, mapping the academic literature at the intersection of both concepts, with the aim of identifying emerging patterns, conceptual linkages, and research gaps. The review addresses four research questions: (1) How is the relationship between Industry 4.0 and reshoring conceptualized in the literature? (2) Which Industry 4.0 technologies are identified as enablers of reshoring? (3) What types of reshoring are associated with Industry 4.0? and (4) What are the characteristics of the current body of literature? The included studies reveal a research field that is both emerging and diversifying. While some studies explore this connection in detail, others still treat it as a secondary theme. A prominent conceptual framing views Industry 4.0 primarily as a set of technologies that enable firms to neutralize labor cost disadvantages in high-cost home countries and enhance flexibility, agility, and responsiveness, especially through automation, additive manufacturing, and robotics. Among the types of reshoring, backshoring emerges as the most explicitly linked to Industry 4.0. While reshoring has been widely studied in terms of cost and risk, few studies consider its impact on sustainable value creation. The lack of integration between reshoring and value frameworks highlights the need for a new conceptual approach, which we propose as “value coordination.” This review sets the foundation for a PhD project investigating how Industry 4.0-enabled reshoring can be leveraged to align multiple value forms (e.g., value absent, value missed, value destroyed, etc.) in sustainable manufacturing strategies.

Keywords: digital transformation; industrial digitalization; manufacturing relocation; sustainability; value creation