

Abstract

Addressing Unfairness in Fresh Fruit Supply Chains in the United Kingdom with Technology Adoption for Improved Supply Chain Resilience [†]

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This research aims to develop a better understanding of how the adoption of Industry 4.0 technologies, specifically the use of big data (BD) and blockchain, can help from the standpoint of creativity to promote responsible and ethical procurement and supply chain practices. In particular, we aim to explain how creativity can be employed as an alternative supply chain resilience strategy to address issues of unfairness to support the resilience of fresh fruit supply chains in United Kingdom (UK). Overall, the aim is to minimize potential of disruptions. In the present era, disruptive events and ongoing challenges have considerably hindered the ability of businesses to produce and distribute their goods. Such events, to mention only several, include COVID-19, terrorism, natural disasters, political unrest, and economic issues with potential national and global implications. Moreover, the aforementioned disruptions have heightened the cognizance of scholars and professionals alike regarding the need for greater resilience in supply chains as a means of alleviating potentially catastrophic consequences. Much emphasis has been placed on addressing the negative impacts of tangible, visible, and catastrophic events through building more resilient supply chains. However, intangible but disruptive and prevalent occurrences such as unfairness in supply chains, although being addressed, are still in the infancy phase of being resolved with respect to supply chain resilience. Furthermore, such intangible disruptions tend to be aggravated by tangible events. In particular, there is a paucity of prior research on the connection between supply chain unfairness and resilience. The presence of unfair practices within the supply chains of the agri-food industry has the potential to generate food insecurity. In this research, unfairness is addressed as a disruptive intangible event affecting supply chains that requires management. It has been posited that risk categorization is key to identifying the relevant mitigation strategies. Specifically, in this study, unfairness to suppliers in the agri-food supply chain is a form of demand risk because it emanates from the downstream part of the supply chain.

The study will investigate how industry 4.0 technologies' adoption, specifically, big data and blockchain, can mitigate unfairness and support creativity in agri-food supply chains as a practical application of alternative strategies for cultivating supply chain resilience beyond the established traditional strategies or capabilities of flexibility, redundancy, collaboration, and agility. The specific case considered within the context of the UK is fresh fruit supply chains as affected during Brexit. According to the constraint–creativity paradigm, it is possible to develop creativity from constraints. Therefore, in this study, the constraint–creativity paradigm informs the practical implementation of BD and blockchain



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technologies to promote the creativity that enhances supply chain resilience. Creativity as a strategy to enhance supply chain resilience is based on the tenets of the extended resource base view (RBV) theory. Creativity that emanates from industry 4.0 technologies' adoption is treated as an intangible resource or capability in this study. This research employs the extended RBV theory to address the issue of supply chain resilience using a mix of methods. This is achieved by leveraging the tangible and intangible benefits of industry 4.0 technologies' adoption to effectively manage supply chain disruptions (unfairness in this case), thereby enhancing the overall resilience of the supply chain.

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