

Exploring the impact of supply chain disruptions on food digital platforms

How are digital platforms reconfiguring food supply chains during extreme disruption?

Purpose

Emerging digital e-commerce platforms are transforming how food supply chain (FSC) actors behave, operate and procure products and services. Contemporary supply chains, particularly those with international footprints, present considerable challenges in terms of complexity, agility and adaptability to external disruption. This research seeks to explore and evaluate the contributions digital platform organisations offer evolving FSCs during extreme disruption with relevance given to the COVID-19 pandemic. Research into food waste along with digital platforms and their responsiveness to external disruptions will propose valuable knowledge on both academic and societal levels. Further insights into adjusting supply chain design to meet structural shifts and resultant reconfiguration will be provided given the issues of FSC waste and disruption.

Design/methodology/approach

An interpretive inductive approach is proposed to unravel how digital platforms are transforming and facilitating operation in times of extreme stress, with a focus on both service and waste implications. A review of extant literature will be conducted together with structured, in-depth virtual interviews of digital food platform organisations operating in the UK. Discussions and cross-field expert opinion review will be undertaken through an iterative Delphi questionnaire process.

Findings

It is anticipated that findings from this study will inform FSC actors on future supply network development, while also highlighting key strategies and success factors for growth. Findings will also disclose understanding into the performance of digital platforms as superior mediums concerning FSC waste reduction, adaptability and risk-management capabilities. Inputs to the analysis mapping and efficient operations of digitalised FSCs will be provided, with broader implications for alternative digital platform organisations also.

Practical Implications

This study will have significant implications for food system actors, regulators and policymakers. Key frameworks and design features will be proposed to better enable efficient food provision and sustainable management. A holistic approach to analysing, managing and developing FSC components will also be key in determining the interconnected nature of digital platform operation and transformation. Review stages of extant literature, expert opinion and industrial case studies will provide recommendations for further development encompassing food and service provision. Insights will also be offered with relevance to improved FSC risk mitigation and operational efficiency in times of disruption. Can digital platforms effectively absorb the effects of external shocks while leveraging intelligence, consumer satisfaction and sustainability objectives? Will external disruptions, such as COVID-19, trigger provisional or long-term operational transformation in UK food supply chains?

Keywords

Digital Platforms; food supply chains; disruption; food waste; Supply chain operations; reconfiguration; e-commerce; COVID-19

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