Supply chain traceability

“A supply chain is only as strong as its weakest link.”

Example: the ‘global recall’ of pork contaminated with dioxins in Ireland in 2008

The frequency and severity of product recalls has been increasing over the past decade. Notable examples of recent ‘global’ product recalls include the 2010 Toyota automotive recall, the 2008 pork dioxin recall in Ireland, the 2008 melamine tainted milk recall in China, and especially the global recalls caused by Bovine Spongiform Encephalopathy (BSE). In order to improve product quality, ensure food safety, and sustain a competitive advantage, many food producers are turning to ‘supply chain traceability’. The ability to trace the origin, movement, and destination of products along the supply chain has been associated with improvements in operational performance, inventory optimisation, product quality, and food safety. Increasingly, consumers, retailers, customers, suppliers, and regulators are encouraging food producers to be able to trace the origin of ingredients and products ‘one step forward and one step back’ along the supply chain. In parallel with this trend, recent technological developments, such as Radio Frequency Identification (RFID), have enabled food producers to trace and track products using real time data. However, the increasingly complexity of global food chains means that many firms find it difficult to successfully trace products along the farm-to-fork food chain.

Moreover, comparatively little attention has been given to which Supply Chain Management (SCM) strategies and management practices can help managers to successfully trace the origin, movement, and destination of products within the agri-food industry. Consequently, this project seeks to examine which business strategies and management practices, such as Total Quality Management (TQM), Statistical Quality Control (SPC), quality training, inter-firm computer integration, Just In Time (JIT) delivery, supply base reduction, supplier integration, supplier development, information transmission, and collaborative relationships, help firms to trace products along food chains. Moreover, we also explore the impact of supply chain traceability practices on product quality, defect rates, process efficiency, inventory stocks, firm performance, supplier risk, and supply chain responsiveness and resilience. To achieve this goal, we use advanced statistical analysis using data from a large cross-sectional survey to food producers within the UK and Ireland agri-food industry.

If you have any further question about this research, please feel free to get in touch.

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Key references: supply chain traceability


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