

Global Supply Networks (GSN) in the Food Industry

Towards Network & Product Architecture

Research Aims

- ◆ To understand the specific product characteristics and the uniqueness of the food industry and its global supply networks (GSN)
- ◆ To explore the key architecture of GSN in terms of structural (strategic) and infrastructural (dynamic) elements for GSN reconfiguration within the food industry
- ◆ To examine the linkages and relationships between food product architecture and its influences on the global supply network architecture
- ◆ To capture the evolutionary patterns of food product characteristics and their GSN reconfiguration patterns under the new global business environment in the global food industry

Food industry is a highly fragmented and complicated industry with a large number of participants, a variety of product mix, and specific product characteristics such as limited shelf-life, perishability, seasonality, temperature sensitivity, deterioration and contamination during transportations, product safety and quality control, etc. In conjunction with the globalisation of the food industry and markets, the industry is now facing dramatic changes due to global competition and ever-changing consumer preferences. Therefore, looking at the global food industry through the lens of supply chain management enables the industry to holistically improve its efficiency and effectiveness under such global dynamic environment. However, it is still unclear of how food firms restructure and position themselves to be best suited with today's dynamic business environment, particularly within a wide range of different food products. As a result, to survive under such competitive environment, a clear understanding of the specific product architecture and its suitable supply network structure is then required.

To date, the relationships between the variety of food products and their suitable supply network structure are still unclear as well as a theoretical knowledge of GSN construction and product architecture. Therefore, this research seeks to answer the question 'how and to what extent a variety of food product architecture influences global supply network (GSN) structure'. To answer this question, both food product architecture and GSN structure need to be further explored. Hence, this research aims to firstly underpin the theoretical knowledge of GSN architecture in terms of strategic (structural) and dynamic (infrastructural) mechanisms in the food industry. In the meantime, a wide range of food product characteristics and architecture will also be captured throughout case studies with food firms. Then, the linkages and the degree of relationships between product architecture and GSN structure shall be examined.

Outcomes

- ◆ Summary of the key specific characteristics of the food industry, its uniqueness, and its product specific characteristics
- ◆ A theoretical framework of global supply network (GSN) structure/construction, and its strategic and operational components for the purpose of network reconfiguration
- ◆ Linkages between food product determinants and GSN components
- ◆ A degree of relationships between each product architecture and GSN components
- ◆ Case examples of food products and its suitable global supply network structure

Further information from

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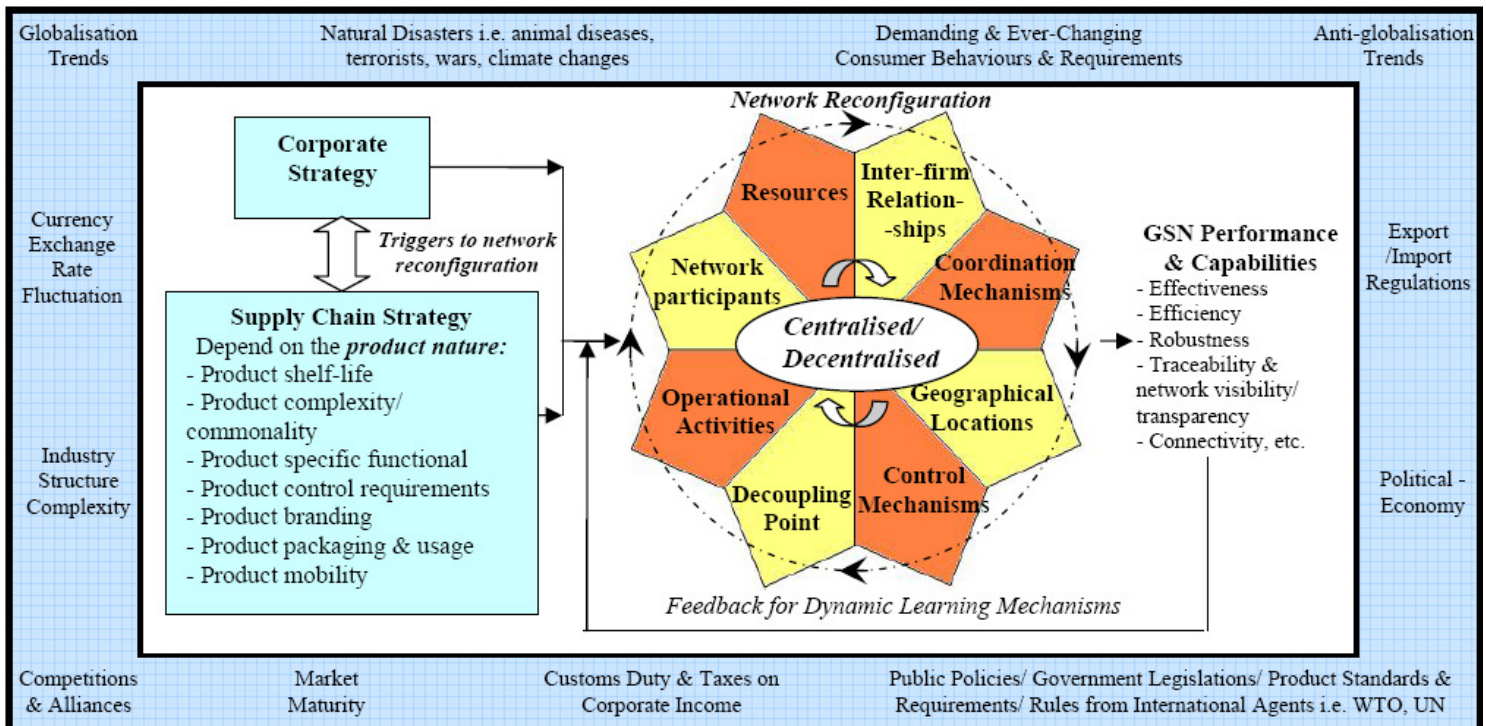
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Research Scope

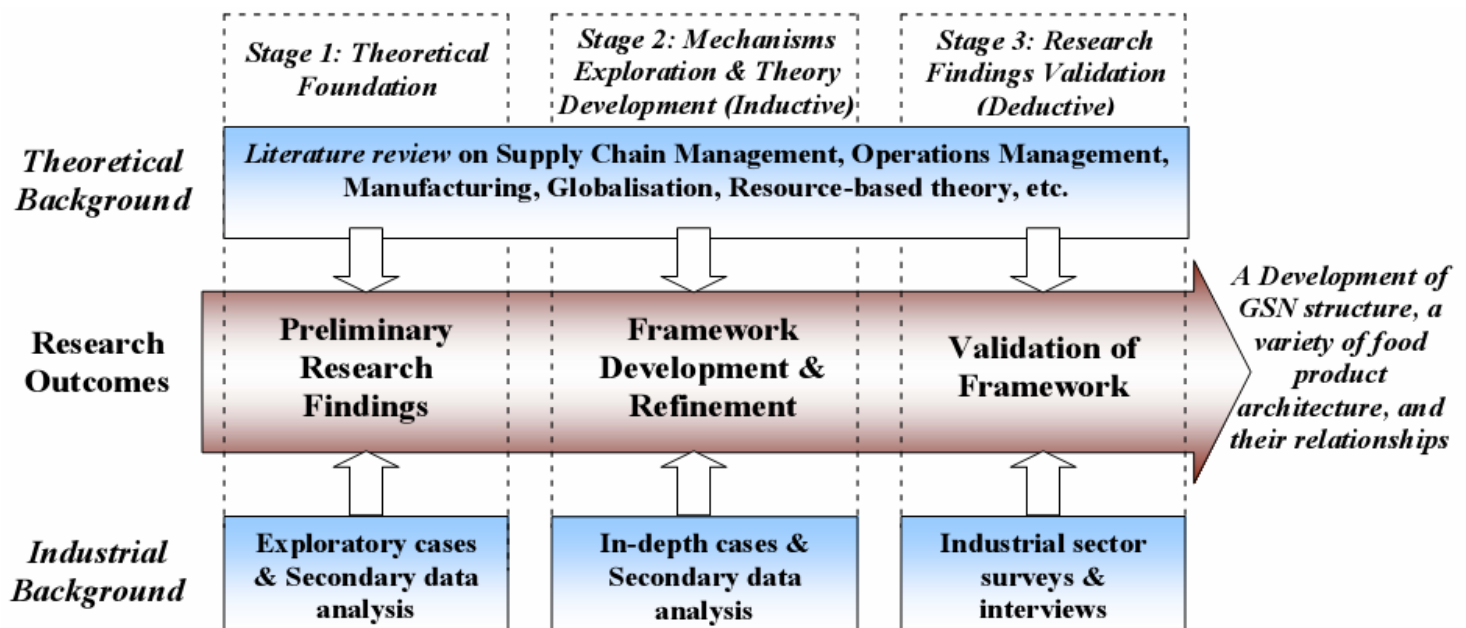
The research work on a GSN system in the food industry covers three main streams:

- ◆ The key attributes of food product architecture which influence GSN reconfiguration in terms of structure and infrastructure
- ◆ The architecture of GSN construction in terms of structural and infrastructural elements for the network reconfiguration under a firm perspective
- ◆ The relationships and linkages between food product determinants and GSN construction elements illustrating how product characteristics effect on GSN patterns



Research Approach

This research work is structured into three stages as illustrated below. The main focus of this research is to examine the product and supply network architecture, their reconfiguration patterns, and the linkages between the products and networks through the case studies with international food firms.



Benefits to Companies

- ◆ A guideline on supply chain design decisions and reconfiguration critical to product and company under consideration
- ◆ A deeper understanding about the ways in which food product architecture & determinants are linked to many decisions across supply chains strategically and operationally.
- ◆ Examples of cases under the topic of global supply chain management within the food industry