A Moveable Feast: the Changing Dynamics of Food Supply Chains in Ireland

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Recommended Citation
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Introduction
Supply chain management (SCM) has become a more commonly used phrase throughout business in recent years. Nowhere has this been more evident than in the food sector. This can be attributed to recent developments in the industry which have included, but are not limited to:

• traceability requirements;
• the adoption of centralised distribution by the retail multiples;
• more stringent requirements in terms of, for example, store replenishment and on-shelf availability;
• continuing downward pressure on cost; and,
• increased competition.

These, along with many other key success factors in the sector, have sharpened the industry’s focus on SCM. Indeed, the increasing use of the supply chain concept in the media is a reflection of this. However, many unanswered questions remain. For example:

• What is SCM and what are the key SCM issues in the food sector?
• What are the key characteristics of SCM excellence?
• How do Irish companies measure up?

This article aims to address these questions, with reference to NITL’s work in the sector over the last decade.

What is SCM and What are the Key SCM Issues in the Food Sector?
SCM is about much more than the physical movement of product, although this remains a critical constituent activity. NITL’s Four Fundamentals represents an attempt to concisely yet comprehensively define the essence of SCM.

Fundamental 1. Firstly, the objectives of SCM are to meet or exceed the required or demanded customer service level in targeted markets/segments and to optimise total supply chain investment and cost. This service/cost approach has long been regarded as
central to SCM. This approach requires companies to have a clear understanding of both issues. Customer service requirements, dictated by the market place, “sets the spec” for the supply chain. Achieving this level of service at the optimal cost focuses attention on the elimination of “non value adding activities” (NVAs) throughout the supply chain. It is clear in the food industry that customers are demanding higher levels of quality and service at increasingly competitive prices. Given that customer service is delivered by the supply chain, and that most of the cost of supplying food is tied up in the supply chain, it is unsurprising that SCM has become more recognised in the sector in recent years.

Fundamental 2. Secondly, every product or service is delivered to the final consumer (the only source of “real” money in the chain) through a series of often complex movements between companies which comprise the complete chain. An inefficiency anywhere in the chain will result in the chain as a whole failing to achieve its true competitive potential. In other words, supply chains are increasingly competing with other supply chains rather than, in the more traditional axiom, companies simply competing with other companies. The phrase “supply chain” is used to indicate that the chain is only as strong as its weakest link. The simple representation in Figure 1 (below) of a supply chain shows product flowing from the raw material source through the various stages in the chain to the final consumer. Money then flows back down the chain. The point is that every link matters and that value is added, and profit generated, at each link along the way.
The phrase “From the Farm to the Fork” reflects the application of this concept of supply chain integration in the food industry.

**Fundamental 3.** For a supply chain to achieve its maximum level of effectiveness and efficiency, material flows, money flows and information flows throughout the entire chain must be managed in an integrated and holistic manner, driven by the overall service and cost objectives. It can be argued that managing the information flows is the most critical of these activities. This is because the flow or movement of materials or money is usually triggered by an associated information movement. Effective management of material and financial flows is, therefore, predicated upon the effective management of the related information flows. For this reason, information and communications technology (ICT) is becoming an increasingly important SCM enabler. For example, the moment an item is sold at the supermarket check-out, this information is captured via a bar code reader and can be made available to be read immediately anywhere in the distribution chain. Developments in emerging technologies - such as radio-frequency identification (RFID\(^1\)) - are likely to become more important supply chain enablers in the coming years.

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\(^1\) Radio-frequency identification (RFID) is an automatic identification method, relying on storing and remotely retrieving data using devices called RFID tags or transponders. An RFID tag is an object that can be attached to or incorporated into a product, animal, or person for the purpose of identification using radio waves.
**Fundamental 4.** Finally, this holistic approach requires a reappraisal of the way in which both internal and external customer/supplier relationships are created and managed. SCM is not a “zero-sum” game based on adversarial relationships as has traditionally been the case in many parts of the food industry with powerful retail multiples dictating terms of business to less powerful suppliers. Rather, it needs to be more of a “win-win” game based on partnership approaches. This raises many questions about the future of relationships between food sector companies. There is some, albeit limited, evidence that this is beginning to be taken on board.

**What are the Key Characteristics of SCM Excellence?**

So what are the characteristics in evidence in companies that might be regarded as world class? “World Class” in this context means companies that have been successful in tough, competitive international markets over a sustained period of time. It is impossible to develop an exhaustive list of the characteristics of SCM excellence but the following four elements appear to be of critical importance for most companies in most sectors:

- Identification and measurement of customer service because customer service ‘sets the spec’ for supply chain design
- Integration of supply chain activities and information because many supply chain NVAs are caused by fragmented supply chain configurations
- SCM a senior management function because SCM is a strategic activity
- Establishment and measurement of supply chain key performance indicators (KPI’s) because what gets measured gets done!

This is based on documented evidence of SCM “best practice” and allies with the author’s experience. Any worthwhile attempt to re-engineer supply chains clearly needs to focus on the adoption of these key characteristics.

**How Do Irish Companies Measure Up?**

The foregoing raises fundamental questions about the extent to which companies understand and implement SCM concepts and practices. NITL carries out research aimed at assessing the supply chain capability of companies on an ongoing basis. The most
recently available data is from a comprehensive study which covered a wide range of SCM activities in over 1,000 companies from a range of sectors, representing both the Republic of Ireland and Northern Ireland². A number of interesting facts emerge in relation to the four key characteristics of SCM excellence outlined in the previous section.

- Approximately 50% measure customer service formally and those have very limited measurements
- Companies score low in relation to having the latest supply chain ICT and having them integrated across the supply chain
- Less than 10% have any formal SCM position
- Few companies had clearly defined SCM KPI’s

It should be noted that this data is very much in line with an earlier study which focussed largely on practice in the food industry specifically. Overall, whilst pockets of excellence undoubtedly do exist, there is significant room for improvement in these key areas. It is important, therefore, that any robust approach to supply chain improvement and re-engineering at least addresses these areas meaningfully.

**Conclusions**

Customers are becoming more discerning and markets more sophisticated. The changing competitive landscape requires companies in all parts of the food industry to review the way supply chains are configured – it is in many ways a moveable feast! However, all available evidence points to the significant benefits that can be derived from the effective adoption of SCM thinking. However, there is a need for a better understanding of: (i) how appropriate supply chain change can be identified; and, (ii) how this change can be most effectively implemented. The issues raised in this article provide some pointers as to how companies in the food sector can begin to address these issues.

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² *Competitive Challenges, Chain Reactions* describes this work in more detail and is available from the author.
About the Author

Edward Sweeney is Director of Learning at the National Institute for Transport and Logistics (NITL), based at the Dublin Institute of Technology (DIT). NITL was established in 1998 as Ireland’s “Centre of Excellence” in supply chain management. Since then it has provided a range of education, training, consultancy and research supports to companies in Ireland and abroad. The importance of the food industry to the Irish economy, and of SCM to the Irish food sector, is reflected in the fact that NITL has worked extensively in this area. At NITL Edward is responsible for the development and implementation of the integrated supply chain management (SCM) development programmes and carries out research and consultancy work on behalf of NITL client companies. He is an engineer by background and has worked and lectured in over 20 countries in Europe, North America and Asia. His work has been widely published and he is a regular contributor to business and academic conferences and seminars throughout the world.