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2004-09-01

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Recommended Citation

Finn, C., Sweeney, E.: The Role of Supply Chain Management in Irish Enterprise Strategy Development:a Three-Dimensional Approach. In Enhancing Competitive Advantage through Supply Chain Innovation, Proceedings of the 9th Annual Conference of the Logistics Research Network (LRN2004), pp.183-187. Dublin, September 2004.

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THE ROLE OF SUPPLY CHAIN MANAGEMENT IN IRISH ENTERPRISE STRATEGY DEVELOPMENT . A THREE-DIMENSIONAL APPROACH.

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Abstract

The Irish economy has grown strongly in recent years. This, combined with other factors in the international trading environment, has sharpened the focus on the need for innovative strategies at a national level which can contribute positively from an enterprise strategy development perspective. As traditional manufacturing activity has migrated to lower labour cost economies questions have been raised concerning the role of supply chain management (SCM) in the evolving Irish business environment. This paper describes some of the main drivers in terms of both SCM and the changing economic and business environment. It goes on to propose a three-dimensional approach to understanding the potential role of SCM in the new scenario. This in turn informs the logistics and SCM research agenda from a national policy point of view.

Keywords: enterprise strategy, virtual supply chains, integration

Introduction

Supply chain management (SCM) is the integrated management of all supply chain activities (including purchasing, production planning, warehousing, materials handling, transportation, inventory control and order fulfilment). It aims to deliver appropriate levels of customer service to targeted market segments at the optimum total supply chain cost and investment. As such it is an essential activity in every enterprise (Sweeney 2002a). As customer service has become an increasingly important order winning criterion in many sectors SCM has assumed a more significant role.

Recent years have witnessed significant changes in the global business and economic environment. The growth of trade blocs, particularly in Europe, North America and Asia has resulted in an increasingly integrated world economy. Increased levels of inward investment, particularly significant in the recent development of the Irish economy, have accentuated this trend. Reductions in the barriers to the movement of goods and services, capital and people have all contributed to this fundamental shift.

This paper describes ongoing research on the impact of changing SCM perspectives on economic, industrial and enterprise strategy in Ireland. Following an examination of the evolving role of SCM in the dynamic international environment, the role and practice of SCM in Ireland is discussed. The impact of the main drivers on the future role of SCM is outlined. Based on this, the authors propose a three-dimension perspective to Irish enterprise strategy. This informs the development of the ongoing strategic SCM research agenda.

Supply Chain Management and the Changing International Environment

Changes in the global economic and business environment have resulted in substantial shifts in competitiveness, particularly in manufacturing industry. In developed countries service industries, rather than manufacturing, have become ever more important in terms of economic growth and employment. Developing countries have increased their industrial capability and have, in many sectors and geographical regions, gained a significant foothold in major market segments. This, combined with the outsourcing of many heavily labour intensive activities to lower cost locations, has had a major impact on global economic structures and trade patterns.

These changes require governments to adopt new perspectives in relation in economic and industrial development. From the point of view of individual companies there is a need to adopt new strategic outlooks. These new approaches need to be informed by the context in which firms operate – the

changing, and increasingly internationalised, business and economic environment. From a supply chain management (SCM) perspective these changes have brought with them many new challenges. This "International Challenge" brings with it both opportunities and threats. The opportunities relate mainly to access to markets in rapidly developing new economies. The threats derive mainly from competition from new geographical sources. The former requires organisations to build international logistical and supply chain capability. The latter requires organisations to adopt a strategic view of the role of SCM in order to minimise the impact of the potential threat.

Supply Chain Management in Ireland

In addition to the potential customer service and cost benefits, SCM is particularly important to the competitiveness of companies in Ireland for a variety of reasons including:

- Ireland's open economy means that both imports and exports represent a large proportion of economic activity as measured, for example, by gross domestic product (GDP);
- Ireland's economic success has been largely driven by successful exporting from key industrial sectors;
- Ireland's relative geographical peripherality, and the resulting transportation cost disadvantage compared to companies based in more favourable locations, in effect forces companies located in Ireland to look towards more broad-based SCM approaches by way of compensation;
- Many small Irish companies are part of larger pan-European and even global supply chains.

SCM and logistics is not a sector. SCM and logistics activities are carried out in all sectors and represent a major source of employment. For example, a recent report estimates employment in the logistics sector alone at 86,400 (FAS, 2002). Furthermore, recent NITL studies of SCM practice in Irish indigenous companies indicate that, whilst pockets of excellence undoubtedly exist, there is major room for improvement in many critical areas[1]. For example (NITL, 2001):

- Less than 20% have a formal logistics/SCM position and in less than 4% is it at Board level;
- Less than 50% measure customer service formally and those have very limited measurements;
- Companies score low in relation to having the latest supply chain information and communications technology (ICT) and having them integrated across the supply chain; and
- Few companies had clearly defined SCM KPI's (for example, 35% did not know their total supply chain costs).

Major Drivers of SCM Change in Ireland

A number of important economic and other changes are impacting upon supply chain practice in Ireland.

- Migration of manufacturing, particularly labour-intensive manufacturing, towards lower labour cost locations;
- Raw material and customer market globalisation;
- The trend towards outsourcing of supply chain functionality and the resultant evolution of "virtual" supply chain architectures;
- Developments in ICT which have facilitated supply chain information management – a key enabler of supply chain integration.

These changes mean that SCM is moving up the "value hierarchy". This shift has resulted in SCM becoming more knowledge-intensive, with an associated requirement in terms of knowledge and skill base. In an Irish context, this development has been referred as "2nd Generation SCM" (Sweeney, 2002b).

SCM in Ireland: the future

To assess the role and nature of SCM in Ireland in the medium term one key question needs to be answered:

What will be the key business processes?

There is no simple answer to this question. However, in manufacturing-based companies (i.e. companies who primarily supply products rather than services) there are at least three processes which are fundamental to overall value-adding capability:

1. New Product Introduction (NPI);

[1] NITL's plans for 2004/5 include continuation of this research, with a particular emphasis on comparisons with international practice.

2. Marketing; and
3. SCM.

Firstly, there is the process of New Product Introduction (NPI), a fundamental element of which is concerned with product research and development (R&D). Successful companies have to get new products into the market in a timely manner. The ability to do so is clearly a major source of competitive advantage. Effective NPI involves designers, manufacturing specialists, logistics professionals, purchasing staff and key suppliers, as well as sales and marketing staff and key customers. This approach is based on the well established concepts and principles of simultaneous or concurrent engineering (McGrath, 2004). It is based on the use of multi-disciplined teams and contrasts with the traditional sequential approach based on functional departments. The major benefit is reduced time-to-market for new products but there are numerous other benefits in terms of cost, quality and customer service.

Secondly, there is the process of marketing. Marketing is concerned with the identification and anticipation of customer requirements. This knowledge is a key input to the NPI process. Marketing is also concerned with market and brand development and management. The latter is of particular importance in the context of this paper. Brand equity is the additional amount a customer is willing to pay for a product as a direct result of the brand (Keller, 2002). Developing and sustaining brand equity is, therefore, a key activity in companies. It contributes directly to the value a customer associated with the product, i.e. of itself it adds value.

Good products with strong brands have the potential to improve competitiveness. However, this is only true if products can be supplied in a timely and cost-effective manner. In other words, it depends on the third key process, namely effective SCM. The corporate strategy of successful companies is increasingly coming to recognise this.

These three business processes are the basis of what Sweeney and Faulkner (2001) refer to as the "New Business Model of the 21st Century". The Irish Industrial Development Authority (IDA) refers to these value adding processes as "Strategic Corporate Functions" (IDA, 2001). In relation to inward investment, if overseas companies are to become further embedded in Ireland, there is a need to nurture these key value-adding business processes as a key part of the nation's industrial development policy. For the Irish operation of such a company this deepens the role of the local operation as part of the global entity and helps it to become a vital part of the value chain of the parent company. For the Irish economy, it further embeds the company in the location at which it is established and it provides "increased knowledge based and higher skilled employment" (IDA, 2001).

Within Irish enterprise strategy, it has long been accepted that NPI, with R&D and product design and development as core activities, is a strategic corporate function. Marketing, with brand management as a core activity, has also been long accepted as another key strategic function. These two areas have received specific attention, particularly in relation to knowledge and skills development, for some time. It is only in recent years that logistics and supply chain management have begun to be taken seriously from a policy point of view. This shift can be partly traced to a major government report (Forfas, 1995) which resulted, amongst other initiatives, in the establishment of NITL in 1998.

Key Implications for Enterprise Strategy: a three-dimensional perspective

The implications of the foregoing on Irish economic and industrial development strategy are many and varied. Research to date has identified three key policy dimensions from an SCM perspective. These are in line with the recently published Enterprise Strategy Group[2] terms of reference (ESG, 2004) and formed the basis of NITL's submission to this group.

1. Management of Virtual Chains from Ireland

Manufacturing activity, in particular labour-intensive manufacturing, will continue to migrate to lower labour cost countries. SCM operations and jobs need not migrate with manufacturing. The reason for this is that the knowledge-intensive integrated management of supply chain activities can be de-coupled from the labour-intensive physical material movement. This is possible as a result of

[2] This group was established by the Minister for Enterprise, Trade and Employment to review national enterprise strategy. The group reported in July 2004 (ESG, 2004).

continuing developments in supply chain ICT. Given the experience in Ireland of SCM, and the resulting skills and knowledge base, Ireland is potentially a base from which to manage a pan-European, or even a global, supply chain. This is true for both indigenous and multinational companies. Furthermore, recent changes in the corporate taxation regime (in particular the introduction of a 12.5% tax rate on service businesses) makes the option of companies establishing business units (profit centres) with responsibility for the management of supply chain activities more attractive[3]. Another possible model was proposed in a recent paper (Sweeney, 2002b), which described the conceptual design of a supply chain hub (or village). This design incorporates features which reflect changing paradigms in SCM (Christopher, 1998).

2. Integrating NPI and Supply Chain Design

NPI has been recognised as a critical business process. Companies are increasingly recognising that NPI can not be carried out in isolation from supply chain design. As product life cycles become shorter it is becoming more important that products, and the supply chains that deliver them to the market, are designed simultaneously rather than sequentially. As pointed out earlier, the importance of NPI-related activities, particularly R&D, has long been recognised as an important element of industrial strategy. The same has not been true of supply chain design. The design of supply chain solutions is a highly knowledge-intensive and complex activity. This fact is reflected by developments in the third-party logistics (3PL) sector, where a shift from "box moving" to the design and implementation of "supply chain solutions" is evident. This in turn is driven by the changing requirements of customers.

3. Optimising National Distribution Networks

As the Irish marketplace becomes more sophisticated, and Irish customers more discerning, customer service requirements in the local market have become more demanding for companies. With customer service becoming a more important part of the marketing mix, and with different markets demanding varying levels of service, the design of national distribution networks is now more complex and more critical for companies. For example, the move towards centralised distribution by the multiple food retailers has forced their suppliers and distributors to radically redesign their supply chains and associated distribution networks. This type of activity will become even more important across a range of sectors with increasing market sophistication, downward pressure on costs and the opening up of new channels to market in the form of e-business and e-commerce.

Conclusion

There is a recognition at a policy level that Ireland needs to become an innovation and knowledge driven economy. Given structural economic trends, globalisation, the open nature of the Irish economy and recent developments in ICT, the authors believe that SCM has a critical role to play in the medium and long term. This will be "2nd Generation SCM" in action, with a strong emphasis on the management of value-adding supply chain activities, international supply chain design and effective ICT adoption. Ireland is well positioned to exploit these opportunities. However, any failure to adopt SCM as a central element of enterprise strategy will result in this potential being untapped. The research introduced in this paper will inform the ongoing process of ensuring that this SCM potential becomes the reality of enterprise strategy in the coming years.

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[3] The Ingersoll-Rand operation in North Dublin is an example of some of this thinking in practice.

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