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NEED TO LIMBER UP ON SUPPLY CHAIN MANAGEMENT

The Key to Unlocking the Competitive Potential of Exporters

Edward Sweeney, NITL, DIT

Background and context

Supply chain management (SCM) has become an increasingly important issue for Irish companies in recent years. Ten years ago there was little discussion of the issue in most Irish companies. Now, SCM is widely discussed at business conferences and in the business media, and has come to be regarded as a key source of competitive advantage by Irish companies across a range of sectors. What is SCM? What is driving the increased interest in the subject in Irish companies? What are the key characteristics of SCM excellence? How do Irish companies measure up in SCM terms? These are the main questions which this article seeks to answer.

What is SCM?

Many definitions of SCM exist. SCM can be defined in terms of *Four Fundamentals*.

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. Customer service requirements, dictated by the market place, "set 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.

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. The phrase "supply chain" is used to indicate that the chain is only as strong as its weakest link.

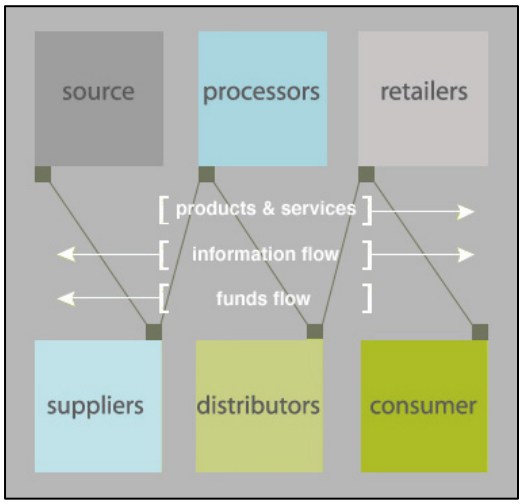

Figure 1 – The External Supply Chain

The representation in Figure 1 (above) is of a "macro" supply chain shows materials flowing from 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.

Most businesses can be described in terms of the five functions buy, make, store, move and sell - known as the "micro" or internal supply chain as shown in Figure 2.

Figure 2 – The Internal Supply Chain

Traditionally these functions have been managed in isolation, often working at cross purposes. Supply chain management means thinking beyond the established boundaries, strengthening the linkages between the functions, and finding ways for them to pull together. A recognition that the whole is greater than the sum of the parts calls for more effective integration between purchasing and procurement (buy), production planning and control (make), warehouse management (store), transport management (move) and customer relationship management (sell), as illustrated in Figure 3.

Figure 3 – Integration in the Internal Supply Chain

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 trigerred 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.

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. Rather, it needs to be a "win-win" game based on partnership approaches. This point is relevant to the interactions between the

key "internal" supply chain functions of buy, make, store, move and sell, as well as to relationships between an organisation and its external customers and suppliers.

What is driving the increased interest in the subject in Irish companies?

Ireland is a small, open, trade-dependent economy and is one of the fastest growing economies in the developed world. It currently constitutes around 1.8 per cent of overall output in the Euro Area. In recent decades it has transformed from being agrarian and traditional manufacturing based to one increasingly based on the hi-tech and internationally traded services sectors. In the context of SCM, the openness of the Irish economy is reflected both in the international mobility of its labour and capital and high levels of foreign direct investment (FDI). Most importantly, Ireland's high level of external trade is reflected in the high ratio of combined exports and imports of goods to GDP which was just under 100 per cent in 2003. Indeed, the export orientation of the Irish economy has been a principal driver of overall economic success in recent years.

In addition to the potential operational benefits in terms of customer service and supply chain economics, especially in export-oriented companies, SCM is of particular importance in an Irish context for a number of other reasons. Given Ireland's relative geographical peripherality and the resulting transportation cost disadvantage faced by companies located here, it is important to note that transportation costs are only one, and often not the most significant, element of total supply chain costs. Furthermore, small companies are increasingly recognising their role as part of, often global, supply chain configurations. This is important as the great majority of companies in Ireland are SMEs. Finally, it should be recognised that it is possible to manage 'virtual' supply chains from Ireland – there has been some evidence in recent years of companies recognising such opportunities.

What are the key characteristics of SCM excellence?

So what are the characteristics in evidence in companies that might be regarded as world class in SCM terms? "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.

How do companies in Ireland measure up?

NITL has been carrying out research aimed at assessing the supply chain capability of companies in Ireland. This comprehensive study covers a wide range of SCM activities and the detailed results will be published in the coming months. Based on a preliminary analysis of the results from over 1,000 companies, representing both the Republic of Ireland and Northern Ireland, 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 information and communications technology (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

Overall, initial analysis of the survey findings appears to indicate that, 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. A number of possible barriers to SCM excellence have been identified and will be explored as part of the ongoing research and associated analysis. These include:

- Inefficiencies are often built into the supply chain
- Communication structures are ineffective and exchange of information poor
- Culture is inappropriate
- There is an excessive reliance on forecasting and stockholding
- Problems are often managed, rather than their causes eliminated

Concluding comments

In short, the SCM has the potential to improve competitive advantage – particularly in exporting companies – and to significantly enhance shareholder value as a result. This requires that creative SCM strategies be developed, and then executed superbly, with strong attention to detail. Finally, the author's experience indicates that the real critical success factors in any supply chain re-engineering or change process relate to the people dimension, and specifically to the need for enhanced levels of knowledge and skills through supply chain learning.

About the author

Edward Sweeney is Director of Learning at the National Institute for Transport and Logistics (NITL) based at DIT. NITL, supported by Enterprise Ireland, is Ireland's national centre of excellence in supply chain management (SCM). It provides consultancy and advice services to companies, carries our research on a range of SCM topics of interest to Irish exporters and has developed a range of innovative SCM learning programmes aimed at managers at all levels in companies. Edward is a regular presenter at business and academic conferences in Ireland and overseas and his work has been widely published.