

The Need for Wider Supply Chain Management Adoption: Empirical Results from Ireland

Bernd Huber and Edward Sweeney

National Institute for Transport and Logistics, Dublin Institute of Technology, Ireland

Contact Details

National Institute for Transport and Logistics, DIT

17 Herbert Street, Dublin 2, Ireland.

Tel: +353-1-6445723

Fax: +353-1-6611943

bernd.huber@dit.ie

edward.sweeney@dit.ie

www.nitl.ie

Abstract

Purpose - Empirical results are provided which suggest that there is a need for more widespread adoption of supply chain management among Irish firms.

Design/methodology/approach - The Republic of Ireland is a small, open, trade-dependent economy and is one of the fastest growing economies in the developed world. However, due to rising costs, there is an increasing trend in Ireland to outsource lower function manufacturing processes to lower cost locations but to retain high skill functions (such as R&D). This trend, together with other factors such as its peripheral location, suggests that supply chain management is critical from an Irish perspective. In order to gain unique insights of current levels of awareness / adoption of SCM and the potential impact SCM could have on the competitiveness, a survey was conducted among 776 Irish firms.

Findings - Overall, the findings suggest that many firms in Ireland pay lip service to the importance of SCM elements and objectives but the majority of firms, about two thirds, have only a passing understanding of what constitutes SCM. Only 25% adopt SCM programmes and only 9% of Irish companies have a specialised SCM or logistics manager. The gaps in their understanding of SCM are matched by the gaps in their awareness of key costs (e.g. 59% of companies do not know their total supply chain costs). While there are supply chain management adopters in Ireland that are already well up the s-curve of innovation transfer, it is with the larger group of less aware companies that must become better at how they manage their supply chains.

Originality/Value - The paper offers a useful insight into supply chain management and its role in Irish industry.

Keywords - Supply chain management adoption, Competitiveness, Ireland.

The Need for Wider Supply Chain Management Adoption: Empirical Results from Ireland

Background to Irish Industry

The Republic of Ireland is a small, open, trade-dependent economy and is one of the fastest growing economies in the developed world. Over the last decade, unprecedented economic growth has seen the level of Irish real gross domestic product (GDP) almost double in size. The Irish economy has been transformed from being agrarian and traditional manufacturing based to one increasingly based on the hi-tech and internationally traded services sectors. In 2003, the services sector accounted for 66% of employment, industry for 28% and agriculture for 6%.

There have been many reasons advanced for Ireland's success, which in combination can help explain the exceptionally strong growth rates experienced (e.g. Layte et al.; Economist, 2004). They include European Union (EU) membership and access to the Single Market; a high proportion of the population of working age; increased participation in the labour market especially by females; a reversal of the trend of emigration toward immigration; sustained investment in education and training; relatively low corporation tax rate and a large multinational presence; coordinated social partnership agreements and a more stable public finance position.

In the context of supply chain management (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). Ireland's share of global and EU FDI has risen sharply in recent years. From just under 4% of the total in 2000, Ireland accounted for more than one twelfth of total inflows to the EU-15 in 2003. On a global basis, the rate of increase was similar, reaching almost 5% of total world inflows (Forfas, 2005). The US was the biggest source of FDI in 2003 with flows from that source estimated at approximately €8bn. or 25% of the total. In terms of stocks of FDI, UNCTAD (2004) records a figure

for Ireland equivalent to 127% of GDP in 2003 (\$193bn.). In absolute terms, this is the sixth highest level among the EU-15 and by far the largest in per capita terms.

However, in relation to manufacturing there is evidence that significant amounts of (mainly labour intensive) activity has migrated eastwards to lower labour cost locations mainly in Eastern Europe and parts of Asia (Enterprise Strategy Group, 2004). There is also a growing realisation that in the medium term, Ireland's ability to hold its position as the location of choice for foreign direct investment in Europe is under threat because of its high cost base.

Looking over the horizon, one of the keys to industrial success will be managerial competence in advanced SCM skills. This is especially true of developed economies such as Ireland where there is this increasing trend to outsource lower function manufacturing processes to lower cost locations but to retain high skill functions – such as research, design, marketing and sales – at the primary base.

A number of other issues combine to make logistics and SCM particularly critical from an Irish perspective. The country's relatively peripheral location results in transportation costs for companies based in Ireland being higher than those in more favourable locations (Forfas, 1995). 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) in Ireland with responsibility for the management of supply chain activities more attractive. One of the necessary skills will therefore be the ability of Irish business to manage increasingly complex supply chains. Excellence in SCM can offset the physical disadvantage posed by Ireland's geographic location by securing savings elsewhere in the wider supply chain.

Therefore, in order to gain unique insights of current levels of awareness of SCM and the potential impact SCM could have on the competitiveness of Irish business, a pre-tested survey instrument was sent to the sample frame of 1,655 companies (both multinationals

as well as small and medium sized companies), randomly selected from established industrial databases across all sectors in Ireland (see NITL, 2005).

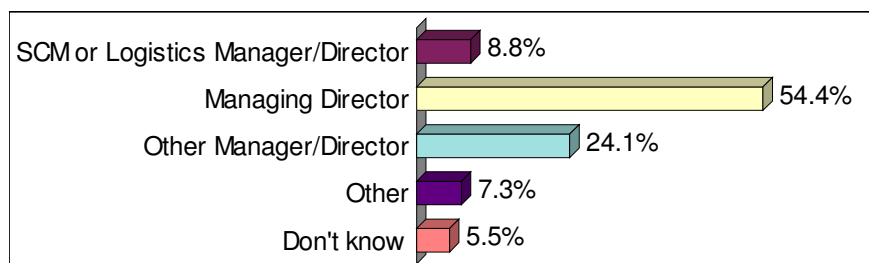
Results from a Recent SCM Survey in Ireland

776 companies across a broad range of sectors responded (i.e. a response rate of 47%), 85% of them small and medium size enterprises and 70% indigenous.

The results have elicited the following:

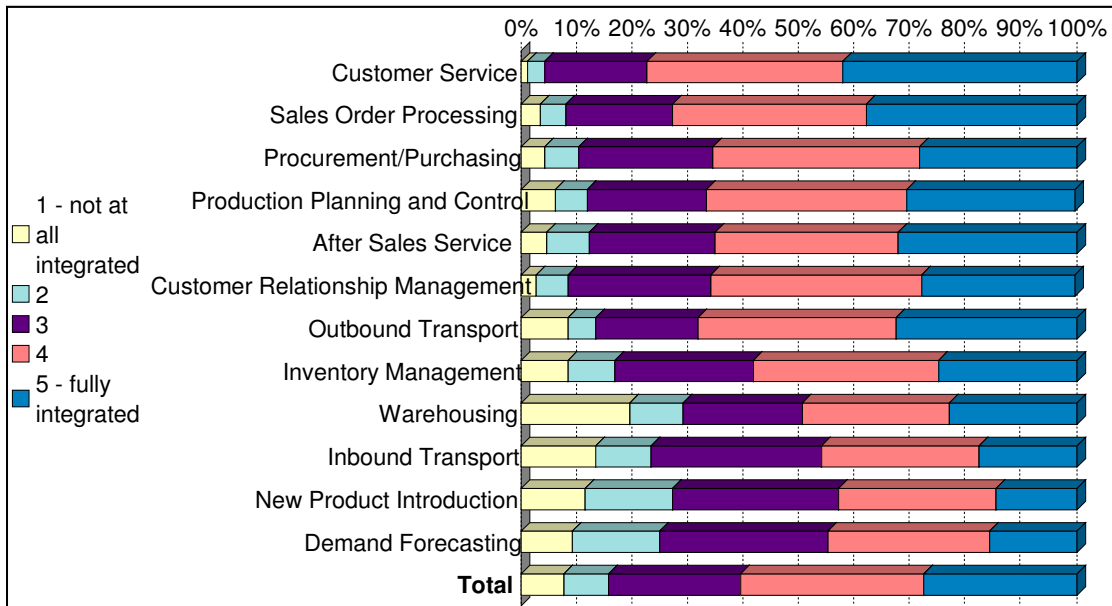
- Transport infrastructure has been identified by 45% of companies as an over-riding constraint of the continuing development of business in Ireland. The reported problems mainly relate to costs and ensuring deliveries on time.
- Approximately one in four businesses have taken on board SCM but some have done so in a piecemeal manner, are not fully aware of the scope of SCM and have not been able to integrate it into their everyday practice.
- Only 9% of Irish companies have a specialised SCM or logistics manager to date. Most of the firms pay lip service to the importance of SCM elements and objectives but do not put in place the organisational structure to support the implementation (see Figure 1).

Figure 1: Reported Responsibility for Supply Chain Management



Much more disturbingly the research reveals that a majority of firms in Ireland, about two thirds, have only a passing understanding of what constitutes SCM. As a consequence they apply it in a haphazard way (see Figure 2).

Figure 2: Perceived Integration of Supply Chain Activities



Also worrying is the belief by many firms that commonly accepted elements of supply chain management have nothing to do with SCM. For example, many companies are aware that they should be focused on customer service but they do not measure their performance in this area in a remotely scientific manner. The gaps in their understanding of SCM are matched by the gaps in their awareness of key costs. Management should not restrict its involvement to the formulation of strategy. There is a clear need for engagement in all key aspects of SCM. In particular top management needs to be directly involved in the process of ensuring that the targets that have been set are being met. However, few companies have clearly defined SCM KPIs, e.g.

- 46% of companies do not have key performance indicators for customer service to date.
- 59% of companies do not know their total supply chain costs.

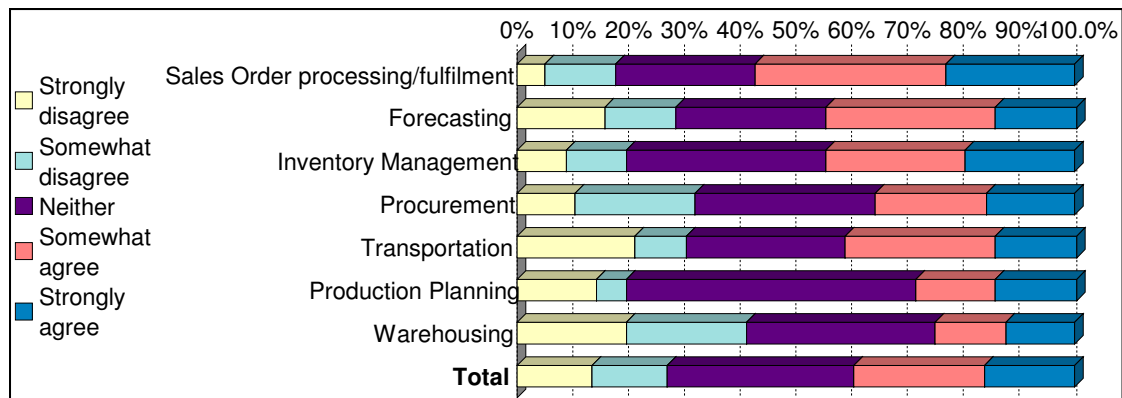
- 41% of firms do not know their transport costs.
- 82% of companies do not formally measure warehousing in terms of key performance indicators.

20% of respondents do not trust the inventory numbers in the stock reports. This is a good example where SCM can help companies save costs. Using information drawn from all along the supply chain managers can calculate just how much inventory should be held at each point in the network to achieve a specified service level for minimal cost, taking into account the uncertainties of supply, demand, and operations. However, two out of five companies do not use forecasting. By and large where forecasting is used, it is seen as a secondary activity undertaken by sales and amended by accountants.

Another example is procurement. 71% of companies do not participate in supplier development programmes and 39% of companies do not use supplier evaluation. Clearly, this finding suggests room for improvement. How can procurement be integrated into supply chain management when suppliers are not regularly reviewed?

In terms of Information Technology, one in five companies accepts their IT systems are not well integrated across the company or the supply chain. 27% of companies would not use the latest systems technology. Overall, there is some improvement potential in particular for warehousing, production planning and transportation (see Figure 3).

Figure 3: Reported Employment of Latest System Technology



The Importance of Wider SCM Adoption for Ireland’s Future Economic Success

In the context of the Irish economy, and the natural disadvantages of peripherality, it is evident from the results that Irish companies must become better at how they manage their supply chains than companies in more favourable market locations. While there are SCM adopters in Ireland that are already well up the s-curve of innovation transfer and demonstrate excellence in SCM, it is with the larger group of less aware companies that the critical challenge lies.

The results suggest that SCM integration has still a lot of potential in particular for Irish-owned small and medium sized enterprises (SMEs) to enhance their competitiveness. For example, 41% of large companies carry out SCM programmes in comparison to only 2% of small firms. To an extent these differences can be explained by the relative importance they assign to SCM because of how big they are, what industry they are in and the resources they have at their disposal. However, small indigenous companies need to develop supply chain management skills as they form part of the external supply chains of larger multinational companies. Making these companies aware of SCM and developing the necessary internal capability is essential for Ireland’s industrial base in order to:

- Minimise the impact of peripherality
- Enable small firms to take advantage of global supply chains
- Exploit opportunities to manage Virtual Supply Chains from Ireland

In skilling up to meet the challenges and opportunities of the knowledge economy, there is a need for more widespread adoption of supply chain management as a higher managerial skill and for investment in SCM best practice through education and awareness programmes for middle and senior managers. The design of supply chain solutions is a highly skilled, knowledge-intensive and complex activity, reflected in a shift from “box moving” to the design and implementation of “supply chain solutions” developments. Education and training needs to be addressed by stimulating the development of industry-relevant logistics and SCM resources and skills.

To meet the competitiveness challenge, Ireland needs to become an innovation and knowledge driven economy. As Ireland squares up to the unprecedented challenge of consolidating its success, and the opportunity of expanded global market reach, it is faced with making critical long-term policy decisions. Famously, the far sighted policy decision of free second level education for all, made by governments in the 1960s, fuelled the ‘Celtic Tiger’ with an abundant, well educated labour force. Such foresight for SCM is needed again. The pressures imposed and opportunities afforded by globalisation, the open nature of the Irish economy and recent developments in IT mean that SCM has a critical role to play in both the medium and long term.

References

Economist, the (2004), "A Survey of Ireland", October 14th.

Enterprise Strategy Group (2004), *Ahead of the Curve, Ireland's Place in the Global Economy*, Forfas, Dublin.

Forfas (1995), *World Class to Serve the World*, Forfas, Dublin.

Forfas (2005), *International Trade and Investment Report 2004*, Forfas, Dublin.

Layte, R., O'Connell, P.J., Fahey, T. and McCoy, S. (2005), "Ireland and Economic Globalization: The Experiences of a Small Open Economy", chapter 16 in Blossfeld, H., Klijzing, E., Kurz, K. and Mills, M. (Eds.), *Globalization, Uncertainty and Youth in Society*, Routledge, New York.

National Institute for Transport and Logistics (2005), *Competitive Challenges: Chain Reactions. An Analysis of Supply Chain Management and Competitive Solutions for the Island of Ireland*. NITL, Dublin.

United Nations Conference on Trade and Development (2004), *Handbook of Statistics*, UNCTAD, Geneva.