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Education, Training and the Role of Logistics Managers in Ireland

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Education, Training and the Role of Logistics Managers in Ireland

Abstract

The paper is based on the analysis of the responses of a questionnaire survey of logistics managers working in manufacturing firms in Ireland. The objectives of the survey were to establish the educational and training needs of the practicing logistics manager. The questionnaire was designed to address issues including the various logistics practices undertaken by the respondents' company and the time spent by respondents on these activities; the skills currently required by logistics managers; the attitude to logistics in respondents' companies; the qualifications held and nature of training received by logistics managers; the effectiveness of training received; future training requirements and how such training might be provided; and the likely future functions of, and difficulties faced by, logistics managers. The analysis of the responses received suggests that the existing supply of education and training is not perceived as fully meeting either the present or future needs of logistics practitioners. There is a need to develop new education and training programmes, which should be aimed at meeting the needs of these practitioners. The most significant areas identified in the survey as being of potential benefit were Logistics and Supply Chain Management; Information Technology and Computing; Warehouse Management; Distribution and Transport Management and Negotiations. The reasons for pursuing further training included personal development, and to obtain useful job related skills.

Introduction

Over the last decade a large number of multinational companies have located high technology manufacturing and other facilities in Ireland which today is an essential node in the global value chains of many of the world's leading manufactures. These companies need employees with logistics skills and the availability of people with these skills is a matter of considerable strategic importance for the continued success of the Irish economy. The importance of the education and training that Irish logistics and transport practitioners receive cannot be exaggerated, as it impacts directly on the efficient management of the supply chain in which they are an essential element. Within their own industry, logistics and transport practitioners are now required to take a wider strategic view rather than the previously acceptable narrow operational view. This increased role and status requires substantially different and enhanced skills, education and training.

The aim of this paper is to establish the educational and training needs of the practising logistics manager to assist in the evaluation of existing programmes and also in developing new programmes. It is clear that logistics/supply chain management skills are essential for firms located in Ireland to reduce both the negative impact of Ireland's relatively peripheral location and also to ensure continued success for these firms in increasingly competitive markets.

The objectives of the research are: to study the role of logistics and supply chain management within the context of both high rates of economic growth in Ireland and the location of many multinational companies involved in global supply chains; to establish the areas of training the practicing logistics managers are likely to have received and to identify the areas of further

education and training required to meet the demands placed on them by increasing international competitiveness and emerging trends in production and distribution.

The methodology adopted for this research was to use a questionnaire survey based approach. The questionnaire was designed by conducting interviews with educators and logistics practitioners in the Irish logistics sector. From the membership listing of the Chartered Institute of Transport and the Institute of Logistics in Ireland, a total of 119 logistics managers were identified as working in manufacturing firms in Ireland. Out of 119 managers, 94 were still active and therefore constituted the target population for the survey. The survey produced 47 percent response rate. The average age of respondent logistics managers was forty four years; they worked for their current organisation for an average of sixteen years and their number of years working in the logistics field in general averaged eighteen years. The analysis of responses, conclusions based on the analysis and some recommendations are presented in the paper.

Logistics and the 'Celtic Tiger'

Logistics and management of the supply chain has emerged as one of the key ingredients for firms' success. This is particularly the case given increased globalisation and trade, the emergence of eCommerce, and the highly competitive nature of most markets. The economy of the Republic of Ireland (hereafter referred to as Ireland) has grown considerably in recent years and has been dubbed the 'Celtic Tiger'. Concomitant with the trend globally, logistics and supply chain management have been of particular importance for firms operating in Ireland's geographically peripheral, Celtic Tiger economy. Central to any business function are the people who perform that function. Given the pivotal role of logistics and supply chain management to

the continued success of the Celtic Tiger's economy, it was considered essential to explore the education, training and role of logistics managers in Ireland. The research was conducted independently as an academic study and without the support of any sponsoring agency. It was hoped that the output of the research would be of benefit to both employees and employers in the sector, to policy makers and to education providers to the sector.

The context then for this paper is the Republic of Ireland, an island country geographically located in the Northwest of Europe with a population of some 3.75 million people. Economic conditions in Ireland in recent years have been so positive that it has been dubbed the 'Celtic Tiger'. The reader will recall that the once vibrant economies of South East Asia were referred to as 'tiger' economies; the term 'Celtic' refers to the earliest immigrants to Ireland, the Celts, who arrived from Central Europe in the period up to 150 B.C. and who fashioned the course of Irish life and culture for the next 1000 years. Ireland's recent economic success has resulted from growth in both the manufacturing and service sectors and is a consequence of, *inter alia*, a combination of careful economic planning, investment in infrastructure and education, inward investment and, not least, EU grant aid. A member of the EEC/EC/EU since 1973, Ireland was one of the first qualifiers for European Monetary Union (EMU) and is now a member of the single currency (Irish Pound IR£ = Euro 1.27).

Ireland has experienced sustained high rates of economic growth in the 1990s (Figure 1). In the period 1994-2000, Gross National Product (GNP) increased by 62% in real terms (1). The annual rate of GNP growth is expected to slow somewhat in the future as a result of supply side constraints, particularly a much tighter labour market, but it is estimated that GNP growth will

still average 5.2% per annum in the period 2000 - 2005. GNP is substantially lower than Gross Domestic Product (GDP) in Ireland due to the importance of profit repatriations by foreign firms and interest payments on the national debt. GDP for 1999 was IR£69bn and forecast GNP was IR£59bn. However, with GDP per capita converging towards EU levels, Irish living standards are rapidly moving closer to those of its EU partners. In 1999 exports from Ireland were IR£60bn and imports were IR£51bn yielding a balance of trade surplus of IR£9bn. Very high unemployment had been the major problem in the Irish economy for many years. However, although unemployment was slow to respond initially, sustained economic growth has resulted in a greatly improved situation.

Figure 1

The most dramatic economic growth in recent years has occurred in the foreign traded sector of the economy. This has been sustained over a considerable period, with the result that it is generally accepted that Irish exports, and the sectors that have contributed to export growth, have been responsible for stimulating the remarkable performance of recent years. According to IDA Ireland (www.idaireland.com), the Government agency responsible for attracting overseas companies to Ireland, over 1200 companies including a large number of multinationals have chosen Ireland as their base to serve the European market and beyond. Table 1 gives examples of such companies which span a range of sectors. In the pharmaceutical sector, for example, nine of the top ten pharmaceutical companies in the world have manufacturing plants in Ireland. Ireland is the second largest exporter of software in the world, after the US. Ten of the world's top fifteen medical device companies have located in Ireland. Since 1980, 40% of all US new

inward investment in European electronics has come to Ireland; these companies generate a third of Ireland's total exports and employ over 35,000 people. Other large exporters include automotive components and aerospace technology. Indeed Ireland's economic success is not based solely on manufacturing industry. In the past four years, for example, over sixty companies have chosen Ireland as the base for their new European call centres. The financial services sector has also enjoyed strong growth. Added to all of this, significant growth in tourism has added to Ireland's new found economic prosperity.

The preference to locate in Ireland seems set to continue. In April 2000 the largest single industrial investment in the history of the Irish State was announced. The US pharmaceutical company, American Home Products Corporation, intends to invest US\$1bn in a purpose-built one million square feet facility at a greenfield site in west Dublin. Also in April 2000, Ireland was ranked #7 out of 47 nations in the IMD World Competitiveness Report (www.imd.ch), having moved up 22 positions since 1996.

Table 1

Factors favouring Ireland as a location for such multinationals include -

- A favourable tax environment: according to IDA Ireland, Ireland offers one of the most beneficial tax environments in the world. Profits derived from eligible manufacturing and qualifying services are subject to a tax rate of 10% until 31 December 2002. From 2003, a corporation tax rate of 12.5% will apply to trading profits in all sectors.

- A productive, flexible and well-educated workforce. According to the IMD World Competitiveness Report, Ireland has one of the best education systems in the world.
- Competitive operating costs and a relatively stable economy, including membership of both the EU and the single currency.

A feature of the whole island of Ireland is that, since the opening of the channel tunnel linking Britain with Continental Europe, Ireland is now the only EU member country without a landlink to the rest of the EU and is thus totally dependent on both the air and maritime transport modes for external access. As noted already above, Ireland has a large economic dependence on external trade and is in a peripheral location *vis a vis* the economic centre of gravity of the EU. Consequently, ports and ferry services are of special importance to the Irish economy. National transport policy in Ireland reflects the various constraints imposed by Ireland's peripherality through subsidised targeted investment in transport infrastructure.

The Logistics Manager

Within this context then logistics and supply chain management issues and, more particularly the availability of employees with logistics skills, are a matter of considerable strategic importance for the continued success of the Irish economy. The importance of the education and training that Irish logistics and transport practitioners receive cannot be exaggerated, as it impacts directly on the efficient management of the supply chain in which they are an essential element. Within their own industry, logistics and transport practitioners are now required to take a wider strategic view rather than the previously acceptable narrow operational view. This increased role and status requires substantially different and enhanced skills, education and training. When this

is combined with increasing international competitiveness and the emerging trends in production and distribution, it is clear that logistics/supply chain management skills are essential for firms located in Ireland to reduce both the negative impact of Ireland's relatively peripheral location and also to ensure continued success for these firms in increasingly competitive markets. While location cannot be changed, the skill and expertise with which Irish logistics and transport practitioners manage the consequences of Ireland's peripheral location can be enhanced through adequate education and training. This enhancement could go a long way towards compensating for the negative impact of location and help gain competitive advantage for firms located in Ireland.

There have been a variety of contributions to the literature over the years dealing with the education and training of logistics managers, the skills required of logistics managers, and the structure of logistics courses. For example, a compendium of research in logistics education was presented in Volume 28, Number 4, of the *International Journal of Physical Distribution and Logistics Management* in 1998¹. According to Naim *et al* (2000) the institutions representing logisticians are actively involved in addressing the issue of education and training, and they discuss in particular the active role of the Council of Logistics Management (CLM) in this regard. Naim *et al* note that the CLM has highlighted cross-functional training as being critical. Closs and Stank (1999) described such a cross-functional curriculum for supply chain education at Michigan State University, while Naim *et al* (2000) outlined a specific template for a logistics course. Murray *et al* (1999) noted the poor public image of logistics amongst students and the initiatives and best practice approaches which can be adopted to counteract this.

¹ Christopher *et al*; Cowell; Keolanui and Wood; Ruppenthal; Dadzie; Dadzie; Murphy and Poist; Rao *et al* (all 1998)

Methodology

For this research, the authors first conducted five interviews with educators and practitioners in the Irish logistics sector. This helped clarify pertinent issues and assisted in the development of a questionnaire. The questionnaire was designed to collect information on:

- Respondents' organisations
- The logistics role of respondents in their organisation
- Respondents' personal qualifications and training
- Respondents' views of issues arising in the future

The questionnaire was pilot tested with three logistics managers and two market research practitioners and subsequently modified. It was decided to concentrate the research effort on logistics managers working in manufacturing firms in Ireland (regardless of whether the firms were indigenous Irish firms or multinational firms). Choosing managers working in the manufacturing sector was considered most relevant to this research as their activities would be likely to involve them in all stages of the supply chain. Identification and selection of a sample of logistics managers proved somewhat difficult as there is no extant definitive listing of all logistics managers working in manufacturing firms in Ireland.

It was decided to use two sources which contain listings of *some* of these managers, namely the membership listings of the Chartered Institute of Transport in Ireland (seven hundred members) and of the Institute of Logistics (Republic of Ireland Branch) (one hundred and twenty members). It must of course be emphasised that not all logistics managers in Ireland are

members of either organisation. In the absence however of a full and true population listing, these membership listings are useful and valid alternatives. A total of one hundred and nineteen individuals were identified from these listings as logistics managers working in manufacturing firms in Ireland. A majority of the members of the Chartered Institute of Transport in Ireland were excluded as they worked for transport firms while many members from both listings were excluded either because they were not managers or because they did not work in manufacturing firms. Contact was made with the organisations employing the identified individuals in the sample to clarify if these individuals had been correctly identified as logistics managers working in manufacturing firms in Ireland. This resulted, for a variety of reasons, in the sample being reduced to ninety four. For example some of the initially identified logistics managers had left their organisation while others were incorrectly classified as having a direct involvement in logistics activities.

The questionnaire was mailed to the ninety four logistics managers. A 47% response rate was achieved, resulting in forty four usable responses. The research results are discussed in the sections which follow.

Changes in Irish Logistics Practices

Almost all respondents (forty one) were currently subcontracting transportation and almost half, twenty one, expected to increase their use of outside sources of transportation. A current reduction in the number of suppliers was reported by a substantial number of respondents, twenty nine, and more than half (twenty five) expected that this reduction would increase. Respondents were asked to specify how their organisations' approach to logistics had changed.

That most frequently reported response was 'Increased Supplier Partnerships'. This confirmed the high number reporting a current practice of reduction in suppliers and implies an increasing emphasis on a 'partnership' relationship with retained suppliers. Outsourcing of transport, distribution, warehousing and inventory management was reported frequently and respondents anticipated a future increase of this practice.

Many causes were given for the changes being experienced in the organisations' approaches towards logistics. The two most frequently mentioned were:

- *Cost Reductions*: it would appear that Irish organisations are becoming increasingly aware that effective logistics management can lead to substantial cost reductions and improved profits.
- *Customer Service/Relations*: this in essence reflects the *raison d'etre* of logistics, to quote Ballou (Yanacek, 1987) "Customer service.....is the reason for the logistics effort".

These new and increasingly changing requirements on the logistics function within organisations leads to the need for a corresponding rise in the level of professionalism and skills among logistics managers. Adequate education and training must be received by practitioners if they are to achieve the levels of competency, aptitude and expertise required to meet today's demands and survive the uncertain challenges of the future.

Changes in Skill Requirements

The new direction in logistics management requires change, and those practitioners that fail to respond and acquire the necessary training will be left behind. Many logistics practitioners report increased job responsibilities: 85% of traffic, transportation and distribution professionals surveyed in America (Quinn, 1994), and similarly 68% in this research effort.

With logistics attaining a strategic orientation in many firms, practitioners must possess certain necessary skills in order to manage their function effectively. The contemporary logistics practitioner needs to be proficient in a range of business, logistics and management skills. A strong academic training in logistics, emphasising technical and computer skills, will be the hallmark of the successful logistics professional; this is a development from the position of logistics professionals in the past who were hired for their strong background in materials management and related areas.

Murphy and Poist (1991, 1994) have shown that the senior-level logistics manager needs to be proficient in three skills categories namely: business skills, logistics skills and management skills. In their survey of executive search firms, logistics practitioners and logistics educators, management skills emerged as the most important of the three, followed by logistics skills and then business skills. Murphy and Poist note that 'these findings suggest that contemporary senior-level logistics managers may have the opportunity of rising to top management positions such as the Chief Manager Officer - a career path unheard of two decades ago'.

Respondents were asked to rate the level of importance of eight listed skills in their current jobs. Three skills were identified as being of equally high importance; these were communications, people management, and problem solving skills, with problem identification following closely. The strong emphasis respondents placed on the human resource management skills of communication and people management would suggest that these Irish logistics managers are, as Murphy and Poist noted when commenting on the logistics managers they researched, 'Managers first and logisticians second'. The results of this survey of Irish logistics managers reflect the emphasis on communications and people management skills identified by many authors. When the respondents in the survey were asked which were the most important skills they would require in the future, the five most important identified were, in descending order of importance:

- Communications/Negotiations
- Computers/Information Technology
- General Experience
- Logistics/Supply Chain Management
- People Management

It is interesting to note that computer and information technology skills were ranked more highly as future than as present skills (Table 2).

Table 2

It is notable that, according to this survey, the relative levels of importance of various skills, as perceived by the Irish logistics practitioner, are what might be expected from a manager in any

functional area. This is probably function-independent. The logistics manager's self-perception is of a manager first and a logistician second.

Education and Training in Logistics

- *Qualifications Held and Types of Training Received*

A high level of education among practitioners was reported, 50% held a certificate or diploma, and almost 25% a degree. All respondents had received some form of education and/or training in the previous two-year period (1996 - 1998). The most common types of training received during this two-year period were:

- Formal College – received by 30 respondents
- In-house training – received by 25 respondents
- Seminar/Workshop – received by 24 respondents
- 'On the job' – received by 23 respondents
- In-house training with an external trainer – received by 14 respondents

- *Effectiveness of Types of Training*

Those surveyed were asked to rank the effectiveness of the training received. These are listed below in descending order:

- Seminars/Workshops
- In- house training
- In-house training with an external trainer
- Formal College
- 'On the job' training

It is interesting to note, also, the apparent low perceived level of effectiveness of 'On the job' training (fifth ranking), even though it is identified as being received by 52% of respondents to this question; also, while formal college training was the type received most frequently, it was ranked only fourth in effectiveness. These results are almost a complete reversal of those of a survey of American logistics managers reported by Quinn (1994). Perhaps these results reflect a cultural difference, with Irish logistics managers appreciating more off site, subject specific forms of training.

- *Reasons Given for Course Effectiveness*

As well as identifying the most effective type of training, respondents were also asked to justify their number one ranking of the effectiveness of the training received (Figure 2). The most frequently stated reasons for effectiveness of training received were:

- 'Job relevance' – reported by 11 respondents
- 'Material content' - reported by 6 respondents

Figure 2

- *Areas of Training Received by Respondents*

The six areas of training received most frequently by respondents were (Figure 3):

- Computer/Information Technology – received by 30 respondents
- Safety/Environmental/Legal training - received by 22 respondents
- Personnel Management training - received by 16 respondents

- General Management training - received by 13 respondents
- Customer Service - received by 12 respondents
- Inventory Management - received by 11 respondents

Figure 3

As noted already, the logistics practitioners reported that ‘customer service/relations’ was the second most important reason why their organisation’s approach to logistics has changed but, surprisingly, customer service ranked only fifth (12 respondents) in the areas where training was most frequently received. Perhaps training is not always received in the most necessary areas. Similarly, the infrequent identification of inventory management as an area of training received (only eleven respondents) does not correspond with the practitioners' response elsewhere that inventory reduction was the second most important change in their organisations’ approach to logistics.

‘Safety/Environment/Legal’ training was received by twenty-two respondents. This emphasis could be due to the increasing pressures being placed on Irish organisations to meet EU regulations. This was also reflected in the number of respondents who identified ‘More geographic cover (National and EU)’ as a significant change in their responsibilities. ‘Personnel management’ is identified as an area of training received by sixteen respondents – this indicates the emphasis respondents placed on people management skills.

- *Reasons for Further Training*

The three reasons for further training identified by the logistics managers were (Figure 4):

- ‘Personal Development’ – 31 respondents
- ‘To obtain useful job related skills’ – 30 respondents
- ‘Improving career/promotion prospects’ – 17 respondents

Salary improvement was not reported as a particularly significant reason to pursue further training; only seven respondents identified it as such a reason. This response supports Honniball’s (1993) finding that there was little evidence to show that education had a positive effect on salary for Irish logistics managers.

Figure 4

- *Areas for Further Training*

The most significant areas identified in the survey as being of potential benefit were (Figure 5):

- ‘Logistics/Supply Chain Management’ - identified by 13 respondents
- IT/Computers - identified by 12 respondents

Figure 5

While ‘Computers/IT Systems’ was reported by these logistics practitioners as the area of training most frequently received, it was ranked only second in the category of ‘areas for further training’. This corresponds with the view of many authors (e.g. Cooke (1992), Quinn (1994),

Gooley (1994)) that, of all areas of education and training identified by logistics managers as being desirable, computers and information technology was given the highest priority.

- *Sources of Training*

Responses to the question where training was available were varied - only three specific institutions were mentioned more than once:

- Cranfield University – identified by 5 respondents
- Irish Management Institute – identified by 3 respondents
- Institute of Logistics – identified by 3 respondents

It is disappointing that there is so little awareness of the various other sources of training available and that so few providers of training appear to be acknowledged by respondents. It would appear to confirm the belief expressed in the Forfás (1996) report ‘World Class to Serve the World’ that in Ireland the available selection of courses is not adequate and that ‘there is a current weakness in the provision of dedicated logistics skills in the education system’ (2).

Conclusion

With the changing role of Irish logistics and transport in recent years and, in particular, the wider recognition of its importance at corporate level, the requirements for managing logistics have broadened. No longer is logistics divided into discreet functions: emphasis is on the integration of these functions to meet continually changing market demands in line with current thinking on supply chain management. As the contribution of logistics and transport practitioners to their organisations’ competitiveness is being recognised, in Ireland as well as elsewhere, they are

moving up the organisation hierarchy. Furthermore, the increasingly competitive environment in which organisations operate has increased significantly the pressures to improve performance and become more cost efficient.

Whether these challenges can be overcome and opportunities exploited, will depend on the ability and skill of Irish logistics and transport practitioners to utilise the transport and communications infrastructures and services available to them. To achieve this successfully, it is essential that Irish logistics practitioners acquire additional skills, as existing ones will not meet the new demands placed on them.

The existing supply of education and training is not perceived as fully meeting either the present or future needs of practitioners. The evolution of logistics in Ireland to meet the requirements of the country's economic development and continued economic success may necessitate an enlargement of present arrangements. It may also require some modification to the portfolio of courses currently available in this area or develop new programmes. The most significant areas identified in the survey as being of potential benefit were Logistics and Supply Chain Management; Information Technology and Computing; Warehouse Management; Distribution and Transport Management; and Negotiations. In addition to these skills, it is important to develop quantitative and qualitative core skills which logistics practitioners need to apply the knowledge gained through the educational and training courses in the most significant areas identified.

The research presented in this paper is an attempt to identify what logistics practitioners in Ireland think their educational and training needs are to deal with changing logistics and supply chain management issues combined with increasing competitiveness in the industry. Any new course development and/or revision/modification of existing courses should take account of these findings to produce programmes to which the practitioners and the future logistics managers are more likely to subscribe.

Notes

1. Statistics on the Irish economy sourced from: IDA Ireland (www.idaireland.com), The Irish Central Statistics Office (www.cso.ie), and the Irish Economic and Social Research Institute (www.esri.ie).
2. For a listing of logistics and transport courses provided in Ireland see Appendix 17.1 of Mangan and Hannigan (2000).

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