

Journal of Economics and Business

Vol. XVIII - 2015, No 1

LEADING LOGISTICS DYNAMICS TO COST-EFFICIENT MANAGEMENT

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ABSTRACT

This paper details an early examination of innovative activities within both inbound and outbound logistics that create value and competitive advantage. Moreover, this paper revisits Alling and Tyndall's (1990) ten logistics rules which govern the contribution logistics can make to profitability. Our research adopted a case-study approach. Hence semi-structured interviews with supply chain managers were conducted within four lead organizations. The findings defend the significance of the logistics principles mentioned by Alling and Tyndall since they can unlock the hidden value of logistics within their enterprises and across their extended supply chains.

Keywords: logistics, profitability, corporate strategy, strategic alliances, business organizations.

JEL Classification: M1

Introduction

As the competitive business environment is changing companies increasingly use their supply chain and logistics to compete and gain market. Indeed, many of the strategic issues faced by business organizations, today, are those relating to the area of logistics (Christopher, 2011). Present supply chain managers are challenged by the dynamic and complex supply chains and by trends and developments that are hard to predict. As a result corporate leaders come to understand the critical role supply chain operations play in a company's success. Alling and Tyndall (1990) identified ten basic principles that are common to all exceptional logistics departments in organizations. When applied together, these principles create logistics excellence, enabling businesses to achieve maximum potential profit. The aforementioned ten principles are presented sententiously in Table 1.

Table 1: The ten logistics principles

- 1. Logistics connection with corporate strategy
- **2.** Formation of strategic alliances
- **3.** Use the power of information
- **4.** Focus on human resources
- 5. Comprehensive logistics organization
- **6.** Focus on financial performance
- **7.** Target optimal service levels
- **8.** Details management
- **9.** Emphasis on logistics "volumes"
- **10.** Assess logistics performance

Source: Alling and Tyndall (1990)

These principles of excellence in logistics, are neither dazzling nor revolutionary, in fact one can consider them as obvious and mundane, or practices that most executives would regarded as "common sense" and as part of the routine of their businesses (Alling and Tyndall 1990).

This article concentrates on the first two principles seeking to answer whether "Logistics connection with corporate strategy" and "Formation of strategic alliances" are actually part of routine business practices or often supply chain managers fail to understand their benefits. The present work is part of a larger study devoted to re-examine these ten principles in light of today's environment. The remainder of this paper will be structured as follows. Initially, the literature review focuses on the aforementioned two out of the ten principles of logistics excellence as set by Alling and Tyndall (1990). The next section describes the preparation of collecting the research data, and the case studies involved in this as well as the necessary tools to conduct it. The following section deals with extensive analysis of the survey data and the paper ends with the conclusions drawn.

Background to the study

The literature review in this paper deals with the task to record logistics connection with corporate strategy and formation of strategic alliances, as two of the ten logistics principles based on the article by Alling and Tyndall (1990), and draw references from the literature available in general.

According to Johnson *et al.* (2008), strategy is the long-term direction and scope of activities of a company, which provides a competitive advantage for the business through the provision of resources within a changing environment, in order to meet the needs of markets and to meet the expectations of key stakeholder groups.

On the other hand, the strategy of logistics determines decisions on the purchase of raw materials, transportation to and from the company, production of the product or providing the service, distribution of products to the consumer with any aftersale.

More specifically, logistics is the process of strategically managing procurement, transportation and warehousing of raw materials, parts and finished goods (and any flow-related information) within the organization and the marketing channels, in such a way that current and future profitability are maximized, and orders are in accordance with the principles of cost effectiveness (Christopher 2011).

Alling and Tyndall (1990) argue that all aspects of logistics processes and operations should be directly connected to the corporate strategy plan. A successful and effective logistics strategy should be guided by the objectives of the company, thus the company mission should be clear, the achievable objectives should be defined and the strategies needed to followed to be developed (Wheelen and Hunger 2009). To enable a company to increase its profits, it should combine

logistics strategy with corporate strategy, therefore both strategies must be aligned, i.e. both to have the same target (Christopher 2011).

Alling and Tyndall (1990) claim that few companies have achieved direct connection of logistics to corporate strategy and they emphasize that too many companies perceive logistics as a "necessary evil" rather than as a source of competitive advantage

Due to the fact that logistics costs can constitute a significant percentage of the total cost of business, it is important to manage them very carefully (Christopher 2011). Alling and Tyndall (1990) argue that this is possible by analyzing the "links" of the value chain. These links illustrate the "exchanges" among business processes in order to achieve competitive advantage and thus they reflect the need of alignment among different business functions (Alling and Tyndall 1990).

In industries where logistics represent a large proportion of total costs, an efficient low cost logistics operation is an important source of competitive advantage as in highly competitive markets even a small advantage on costs is considered important (Alling and Tyndall 1990).

Alling and Tyndall (1990) argue that logistics processes can be regarded as a network of integrated activities that can only be optimized as a whole. Materials management, transportation, warehousing and any other relevant logistics operation should be consolidated and optimized overall. Unfortunately, relatively few firms operate in this manner (Alling and Tyndall 1990).

In the 2000's emerged the development of logistics, and its importance recognized by companies that no longer see it as a simple operating procedure, but as a critical process to the business that is coordinated with other functional strategies and parts of the business (marketing, sales, finance, production), and can lead to success and achievement of business goals (Gattorna 1998). All business functions must be coordinated in order to gain and maintain a competitive advantage and focus on achieving the mission of the organization (Heizer and Render 2004). Christopher (2011), in turn, tells us the following example: For many years marketing and production were considered as separate activities of the business. The purpose of production was to increase the efficiency of work for long periods and the standardization of products. In contrast, the purpose of marketing was to gain a competitive advantage through good customer service, product diversity and the frequent changes thereof. Today, marketing and production should not be operated independently of one another, as conflicts between them only cause obstacles to the achievement of business goals.

Also, Christopher (2011) states that in the past relations of suppliers with their customers were more competitive rather than cooperative, stressing that even today

there are companies trying to increase their profits at the expense of their supply chain partners without perceive that in that way they shift the cost to the previous or next level of production.

To eliminate conflicts of interest arising from the wide sphere of influence of logistics, most innovative companies recognize the significant interdependencies between logistics, production, marketing and sales and seek to emphasize cooperative rather than competitive relationships (Alling and Tyndall 1990).

Alling and Tyndall (1990) argue that organizations should develop close partnerships with all involved parties within the supply chain. However, according to Bagchi and Skjoett-Larsen (2002) there are not many companies willing to integrate with their key supply chain partners, due to the fact that cooperative practices are not understood (Holweg *et al.* 2005). Moreover, the strategic alliances the organizations develop with suppliers, customers, and various supply chain partners should be based on trust, close communication and cooperation (Alling and Tyndall 1990).

The above mentioned partnerships cannot succeed without a timely and mutual exchange of information between the involved parties and thus information systems have played a leading role in coordinating cooperation between firms along the supply chain (Nitchi *et al.* 2009). Planning and execution of effective alliances is not straightforward, especially for multinational companies as it requires careful thought, coordination with customers and suppliers, as well as support and training of all personnel, and also require expenditures to prepare and throw in the functional changes (Alling and Tyndall 1990).

The formation of strategic alliances offers limitless opportunities for profit and this form of cooperation in the supply chain is increasingly in today's business world, as companies pay much attention to the exploitation of their core competencies and outsource other activities, and to this respect the current trend in the market has mainly to do with outsourcing to third parties, i.e. Third Party Logistics – 3PL (Bot and Neumann 2003). Vijayvargiya and Dey (2010) give a modern definition of a 3PL company, as a privately held company that provides logistics services under a contract.

As business organizations face gradually complex and competitive markets, logistics significance will grow and according to Alling and Tyndall (1990) those companies that will emphasize in strategic alliances with selected supply chain partners (suppliers, distributors, transportation and warehousing firms) will reap greater profit from those who run the business as something ordinary. The new competitive model is that supply chain competes with the supply chain, and the

success of any company depends on how well it manages its relationships in the supply chain (Christopher 2011).

Methodology

The impetus for this research was an article by Alling and Tyndall (1990) who reported ten basic principles of logistics excellence which are common for all companies. The purpose of the research via data collection and analysis is to understand whether "Logistics connection with corporate strategy" and "Formation of strategic alliances", as two of the ten aforementioned logistics principles based, are well-timed in the years from 1990 and onwards, and if they are implemented by supply chain managers in today business organizations.

The approach used is the one of case study through interviews with logistics managers, by using a pre-tested semi-structured questionnaire aiming to elicit information on the two key themes mentioned above.

Yin (1984) defines case study as an empirical inquiry that "investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used."

These characteristics make the case study approach suitable for this type of research, as logistics is a rapidly developed field with a lot of significant issues that contemporary logistics managers are facing today, and since the focus is frequently in the importance of strategy and strategic alliances in logistics, this presents a setting where the boundaries of strategy-logistics and strategic alliances-logistics cannot be clearly defined. Furthermore, with regard to multiple sources of evidence, a research design of qualitative nature was developed using semi-structured interviews with senior logistics managers and directors.

Despite the advantages of the method of case study, Yin (1984) describes that many researchers view analysis of qualitative data as the most difficult aspect in the conduct of case studies due to concerns regarding the data collection process and the overload of the researcher from the information received. This is related to the fact that data analysis begins by data collection and thus the initial interpretations and assumptions are examined in next interviews.

As a data collection technique was chosen the method of interview and especially the semi-structured format.

The initial questions were general and during the research process were reviewed and amended according to the circumstances of the interview. Denzin (1970) presents three reasons in favor of open-ended questions:

- it allows participants to use "their own unique ways to defend the world",
- ii. it concludes that there is no set of questions appropriate for all participants, and
- iii. it allows participants to raise important issues not included in the program.

The case study is a suitable method for explanatory research as it answers to questions based on the "how" and "why" that is useful for analysis on topics in which the researcher has little or no control (Yin 1994).

The questions selected for the interview process in this paper were classified into seven modules. The specification of an appropriate number of questions and the composition into modules held to guide the interviews and maximize the information obtained throughout the course of the interviews.

The first part concerns the connection of logistics to corporate strategy. The second part explores ways of using the power of information in order to optimize logistics processes. The third part of the interview was designed to reveal the importance of human resources and assessment practices, education and training. Then, the fourth part focuses on strategic alliances developed by the company itself, emphasizing the importance and the reasons leading to these collaborations. The fifth part concerns the financial performance, examining whether it can be considered as a performance measure of logistics processes. The sixth part unveils the importance of targeting optimal service levels and evaluating the customer service of each company. The interview closes, quoting in the last part ways to evaluate the performance of logistics procedures.

The case study method was described by Yin (1994) as microscopic due to the limited sampling of cases, however, the purpose specification of the research and the parameters adjustment are considered much more important in comparison to a large sample size. However, the use of multiple case studies adds validity and reliability to the conclusions and findings (Miles and Huberman 1994) through the logic of reproduction and replication (Eisenhardt 1989; Yin 1994).

A prerequisite for the sample selection was the voluntary participation in the research and then the consent of the narrator to use an audio recorder. Each respondent received in advance via email the open-ended questions to be answered during the interview, in order to be well prepared for this process. The duration of each interview was about half an hour, and this gave the required time for the proper data and information collection by the narrator.

The participants in this research as shown in the Table 2 were four supply chain managers, from companies operating in Greece. In order to maintain anonymity of participants, companies will be referred to as "Company A", "Company B", "Company C", and "Company D".

All interviews were conducted by telephone at the time that served first and foremost the interviewee. The telephone interview is a widespread method of data collection since the process is faster and more economical for the researcher (Cachia and Millward 2011).

Table 2: Case Studies

	Company A	Company B	Company C	Company D
Industry	Electric Appliances	Electric Appliances	Electric Appliances	Food
Type of business	Commerce / Distribution	Commerce / Distribution	Commerce / Distribution	Commerce / Distribution / Production
Participants position	Commercial Manager / Supply Chain Manager	Supply Chain Manager	Supply Chain Manager	Commercial Manager and / Supply Chain Manager
Company size (Workforce)	Large	Large	Large	Medium
Region	Athens	Athens	Athens	Thessaloniki
Date of interview	10/08/2012	21/08/2012	20/09/2012	27/10/2012

During the interviews, the data were recorded via an audio recording machine. The advantages of using a tape recorder are to ensure data accuracy and to give the possibility to the researcher to hear as many times as needed the content of the interviews. Moreover, a problem quite is the reluctance and suspicion of the respondents to talk to a tape recorder mainly due to unfamiliarity with of the respondents with the research procedures in connection with the interview evaluation

Discussion of findings

Effective supply chain and logistics management can provide a significant cause of competitive advantage in a company, as they offer positively to steady superiority over its competitors in terms of consumer preference (Christopher 2011).

According to Company A:

The company's strategy is based on four key pillars: growth and innovation in products, services and brands, operational optimization, human resources and leadership. Logistics are the connective tissue in all of these.

Supply chain management processes are really crucial for corporate strategy, as are the distinctive but yet, essential link of all business activities (Alling and Tyndall 1990).

According to Company C:

The company's vision is to create a better society by providing our customers with products, systems and services of greater value, based on the latest technological developments, especially in information technology. Our goal is to recognize the real needs of society, set the optimum objectives and exceed those needs. Logistics processes are therefore necessary to enable the company to achieve its goals. The delivery of the product at the right time, the ability to exchange information at all stages of the supply chain and customer service excellence are some of the results of the proper operation of logistics which contribute to the achievement of our goals.

According to Company B:

Our company implements two growth strategies involving "fast innovation" and "fast growth." In addition, the company has three main objectives: product leadership, market leadership, and people-centered leadership. Thus logistics management processes play an important role in achieving these goals.

Furthermore, regarding to Company D:

A link exists among logistics processes and the strategy of our company since both contribute to our customer. One of the primary goals of our company is the right service of our client and the realization of this objective cannot be achieved without the help of logistics.

Logistics can help a company to gain both cost and value advantages (Christopher 2011). This seems to be perceived by Company A which gives the following example:

To all our customers, either internal or external, logistics offer a competitive advantage. For example: when we can have direct service to our customers so that we are better at our times and at products' adequacy, this gives us a competitive advantage in comparison to our competitors.

In current times, businesses must find ways to differentiate themselves from their competitors while the continuous increase of customer expectations contributes to the increasing importance of service as a competitive weapon (Christopher 2011). The customer service seems to be a focus area by Company C:

Deliveries at the desired time, the tracking systems of cargo and other logistics processes, still give us a competitive advantage. Logistics functions are a valuable weapon for the company, and an additional tool used to achieve sales and customer satisfaction.

The view that logistics management affects customer service is stated by Company D:

The level of service offered by a company to its customers is based on logistics procedures. The optimal management of logistics operations (proper inventory management, transparency along the supply chain, etc.) has an impact on customer service and offers an advantage over competitors who are unable to compete likewise.

The relationships between the company members and the cooperation between suppliers and other members of the chain affect the performance of supply chain (Petersen *et al.* 2005). According to Company A:

Logistics is not only supply chain, is about everything related to resources and information sharing. Therefore all our people involved with logistics and understand their necessity.

Furthermore, the problem that many companies face is stated Company B, while Company B tackles it as described below:

Unfortunately not everyone understands the logistics connection with other company activities. For this reason, our logistics department organizes seminars on the basic functions of logistics. The purpose of the seminars is training and education of all departments in order to understand the interdependence of logistics with their own daily activities.

On the optimization of logistics, a further problem occurs, as the whole chain may not achieve the optimal performance even if every member of that optimizes its own (Yu *et al.* 2001). According to Company C:

The function of logistics procedures is considered as a set of integrated operations, so the optimization can only be achieved as a whole. For example, warehousing and distribution processes are interrelated and have to be understood and then to be optimized as a whole and not independently of each other.

Logistics are considered interrelated with all departments of our company. Everyone in the company understands the aforementioned connection, since daily and continuous exchange of information between logistics and other departments is essential for the proper functioning of all departments separately.

With the help of Table 3, we can understand that the companies participated in our research recognize the importance of linking logistics corporate strategy and the crucial impact of logistics to gain competitive advantage.

Table 3: Connection of Logistics with corporate strategy

	Company A	Company B	Company C	Company D
<u>Logistics</u> Processes				
Connection of				
logistics with corporate	Yes	Yes	Yes	Yes
strategy Logistics - a				
source of	Yes	Yes	Yes	Yes
competitive advantage	100	100	100	
Link of logistics				
to other business departments	Yes	Yes	Yes	Yes
Optimization of				
logistics	No	No	Yes	No
processes as a				
whole				

In their effort to become increasingly competitive, companies develop partnerships within the supply chain and with other independent firms, following specific rules and conditions. Moreover, the settings of a successful cooperation are: joint planning and operational control, seamless communication, sharing risks and rewards, trust and commitment of the involved parties, and the common approach

and investment in the relationship (Lambert *et al.* 2004). Cooperation is, therefore, an alternative search of competitive advantage and self-interest. On the other hand, there is a danger in search of personal interest to observe deceit, exploitation of resources and short-term thinking. In this case, cooperation cannot yield the optimum results. As stated by Company C:

Our company is constantly searching ways to provide optimal levels of products and services at the lowest possible cost. In order to achieve this, it is necessary to cooperate with other autonomous organizations. Thus our company is working with other business organizations in order to optimize processes and achieve its objectives. A significant prerequisite is that both members of the partnership understand the importance of the optimum results and the relations are not unilateral but rely on reciprocity.

Cooperation should be based on reciprocity, i.e. the belief that both members will reciprocate cooperation and respect (Andersson and Norman 2002). According to Company B:

Strategic partnerships with companies of different infrastructure work to promote mutual interests in the rapidly evolving market and are an essential instrument for development. These collaborations are not transient but time long and a prerequisite for smooth cooperation it is to maintain the predetermined agreements from both sides. The drive of our company is not low cost at the expense of our partner but through cooperation and reciprocity, the achievement of common goals.

Also, the role of trust in any form of cooperation is catalytic (Spekman *et al.* 2002) and as emphasized by Company D:

Our company's cooperation with others is very important and these independent companies are considered a part of our company and their people as considered our partners. For example the excellent cooperation with our suppliers regarding delivery and quality of goods serves the logistics processes and facilitates the work of all of us.

The success for a company to increase its effectiveness should be based on the actions of other firms, such as the timely and accurate delivery of raw materials from its suppliers (Balou 1999). The example of Company C helps us to understand how the collaboration with the supplier assisted logistics management:

Our company requested from a supplier to deliver the goods in Euro pallets in order to serve the maximum possible warehouse and transportation conditions. The proposal was implemented by the supplier and has helped our company to

reduce the time and cost of transportation since the loading surfaces of trucks and the configuration of our warehouse space are based on the scale of these pallets.

Interesting is the way in which Company A by exploiting the collaboration with its clients, strives to improve its logistics management:

In today's era, competition forces companies to try to keep costs to the minimum. So, as logistics functions are an additional resource for the company, and as our technology allows it, we work primarily with large customers in order to have direct deliveries to warehouses without intermediaries for the purpose to reduce handling costs and delivery time.

Another form of cooperation is with companies/providers of logistics services (3PL Providers). Third Party Logistics-3PL providers undertake to carry out logistics processes on behalf of other companies.

Company B is one of the companies participated in our research that outsources logistics processes to Third Party Logistics-3PL providers exploiting the services they provide:

In order for us to achieve better results in logistics management, we cooperate with autonomous, supportive 3rd part logistics providers. Our company has outsourced to a 3rd party logistics company the following logistics functions: receiving, warehousing and loading of products in stock, shipment of products from the warehouse to customers, returns management (Reverse Logistics) in the warehouse, and a few additional value-added services (packaging / labeling, etc.).

Additionally, Company C outsources a few of its logistics functions:

Our company develops cooperation with a 3rd part logistics provider in order to improve its logistics procedures. The 3rd part logistics company undertakes all the activities related to the storage and distribution of our products to customers. This cooperation reduces the cost of logistics processes and gives our company a competitive advantage.

From Table 4 we can understand the relationship management in the supply chain by modern companies.

Table 4: Formation of strategic alliances

	Company A	Company B	Company C	Company D
Formation of				
strategic alliances				
Significant				
cooperation within	Yes	Yes	Yes	Yes
supply chain				
Developing				
partnerships within	Yes	Yes	Yes	Yes
supply chain				
Collaboration with	No	Yes	Yes	No
3PL Provider				

Conclusions

Nowadays, where competition between companies has increased and customer demands constantly multiply, a prerequisite for the survival of business organizations is to develop a logistics-oriented structure.

Alling and Tyndall (1990) authored an article referring to the ten key principles that assist companies to overcome organizational obstacles in implementing the logistics concept. It's really impressive that the article remains dramatically topical today. This paper answers whether the significance of "logistics connection with corporate strategy" and "formation of strategic alliances" appear to be understood by the companies participated in our survey as means that contribute to the perfection of their logistics processes and increase their profitability. Alling and Tyndall (1990) argued that in order to enable business organizations to increase their profits, they should combine logistics strategy with corporate strategy. Nowadays, numerous companies heed this principle, trying to harmonize these two strategies in order to achieve their goals.

Additionally Alling and Tyndall (1990), emphasized that all logistics procedures can be considered as a "network of integrated activities" that can be optimized as a whole. Businesses understand the concept of "integrated network activities" while observing obstacles for optimization as a whole, arguing that in some cases some decisions are best taken at sector level.

While realizing the importance of information systems, as outlined in the article Alling and Tyndall (1990), and although the majority of businesses use an

information system in this field, there is much room for improvement. Most companies are not prepared to integrate existing information systems in the supply chain and to exploit them as a tool for strategic decisions but they tend to use them only for operational reasons.

Furthermore, Alling and Tyndall (1990), argue that proper human resources management plays an important role in achieving logistics perfection. With regard to human resources, managers today understand the importance of logistics by implementing practices on assessment, education and training of employees.

Also, regarding the strategic alliances that are essentially needed between companies for mutual benefits, as emphasized by Alling and Tyndall (1990), their significance seems to be respected by logistics managers as the latter develop partnerships both inside and outside the supply chain.

Finally Alling and Tyndall (1990), argue that targeting the best service levels is one of the main elements of optimum logistics strategy. To this respect, logistics managers are trying to find ways to evaluate customer service or the use of specific performance indicators or to measure the time required for optimum customer service.

Apart from the above, the evaluation process of logistics processes is considered equally important. According to Alling and Tyndall (1990), the senior logistics managers must apply the basic aforementioned principles and work to improve their performance. Most of the companies surveyed fully understand the importance of evaluation of logistics processes, achieved through financial performance, quality indicators and the sense of customer service.

From the above we can conclude that in our days most of the obstacles in logistics management decline in comparison to the previous years. In any case, current logistics directors feel that there are one or more key areas that need extra care and improvement. Moreover, the continuous quest for improving logistics management is a feature that differentiates a company from its competitors.

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